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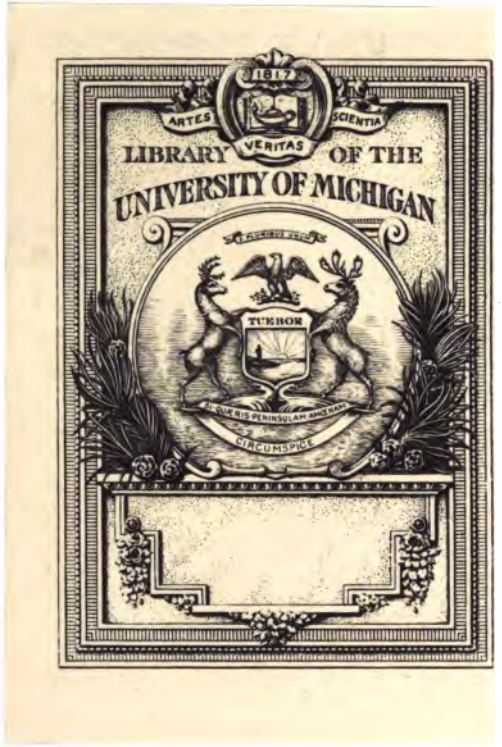
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Education Department Bulletin

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NO. 422 ALBANY, N. Y. MARCH 1908

PROCEEDINGS OF THE

45th ANNUAL CONVOCATION

OF THE

UNIVERSITY OF THE STATE OF NEW YORK

October 17–19, 1907

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1919 DANIEL BEACH Ph.D. LL.D. – – – – – – – Watkins
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1912 T. GUILFORD SMITH M.A. C.E. LL.D. – – – – Buffalo
1918 WILLIAM NOTTINGHAM M.A. Ph.D. LL.D. – – – Syracuse
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45th UNIVERSITY CONVOCATION

OF THE

STATE OF NEW YORK, OCTOBER 17-19, 1907

PLAN OF THE CONVOCATION OF 1907

PRELIMINARY ANNOUNCEMENT

General invitation. The Regents and all officers of any University department, all trustees, instructors and other officers of institutions in the University, officers of the State associations of teachers, superintendents, school commissioners and school boards, and others elected by the Regents, or by Convocation Council are ex officio members of University Convocation. Those holding similar positions in other states and all others interested in education are also cordially invited to attend.

Delegates. Each institution in the University is earnestly requested to send at least one delegate and to cooperate in making this meeting equal in interest and profit to any yet held.

Boards of education are urgently advised to authorize high school principals to attend the convocation and to pay their expenses thereto. It would be a warrantable public charge in view of the benefits to be obtained.

It will add greatly to the success of the exercises and to the convenience and satisfaction of all concerned if members will:

1 Register immediately on arrival;

2 Assemble promptly at each session.

In the plan of the University Convocation for 1907 the precedent of the last two convocations will be followed and the entire time of the meeting given to the consideration of one general subject.

The convocation program for 1907 will therefore deal with *The Place and Mission of Art in Education.* The term is used in its broadest sense and includes not only graphic and industrial art as taught in public schools, but also fine arts, music, and the art of expression in language. It is proposed to develop the two main phases of art education; 1st, creative — as a means of self-expression — including drawing, figures, colors, music, language etc.; 2d, receptive — as a means of enjoyment and self-cultivation — the power of appreciating good art, good music, and good literature.

It is desired that the formal papers be followed by thorough discussion. Many of the leading educators of the State have been asked to participate, but there has been no preferment on our program and all are invited to give their aid, in the hope of securing practical suggestions for the use of the Department and of the schools and colleges.

The attendance at the Convocation was fully up to the high level of 1905 and 1906, the total registration being 400. The regular attendance was of course greatly increased by local attendance from Albany and neighboring cities and towns, and the Senate chamber was crowded at all sessions.

SUMMARY OF SESSIONS

Thursday afternoon, October 17

3 p. m. Informal gathering at headquarters
4 p. m. Executive session of Convocation Council at the Education Department

Thursday evening, Senate chamber

7.30 p. m. Registration
8 p. m. Announcements
District Sup't DARWIN L. BARDWELL, New York City, for Convocation Council
Prayer
Rev. CHARLES G. SEWALL, Albany
8.15 p. m. Chancellor's address
Regent ST CLAIR MCKELWAY M.A. LL.D., Vice Chancellor
Address: The Public Servant
President JOHN H. FINLEY LL.D., College of the City of New York
Address: The Humanizing of Study
President W. H. P. Faunce D.D. LL.D., Brown University

Informal reception was held in the Senate lobby at close of addresses. All members of the Convocation and guests were invited to meet the Regents of the University and the Commissioner of Education.

Friday morning, October 18, Senate chamber

9 a. m. Registration
9.30 a. m. Announcements
District Sup't DARWIN L. BARDWELL, New York City, for Convocation Council
Address: The Province of a Museum of Art in a System of Public Education
Sir C. PURDON CLARKE F.S.A., Director Metropolitan Museum of Art, New York City
Report of Convocation Council on nominations
Report of committee on necrology

Address: Graphic Art as a Factor in Public School Education
HENRY TURNER BAILEY, Editor *The School Arts Book;* former State Supervisor of Drawing, Boston, Mass.
Discussion of same topic
[To show what is being done by the State to assist teachers in bringing art and other subjects more closely to the attention of pupils, the Division of Visual Instruction arranged an exhibit of wall pictures, hand photographs and lantern slides. All were invited to visit the rooms of this division, nos. 442 and 443 (4th floor).]

Friday afternoon, October 18, Senate chamber, 3 p. m.

Address: The Place and Purpose of Music in Public Schools
FRANK DAMROSCH, Director of the Institute of Musical Art, New York City
Discussion
HOLLIS E. DANN, Professor of Music, Cornell University
Address: Expression in Language
BRANDER MATTHEWS LL.D. D.C.L. Lit D., Professor of dramatic literature, Columbia University
Discussion
President RUSH RHEES D.D. LL.D., Rochester University
Address: Industrial Art: How it is Advanced by Art in Education
GEORGE F. KUNZ M.A. PH.D., New York City

Friday evening, October 18, 7.30 p. m.

The members of the Convocation joined with the members of the Hudson River Schoolmasters Club in a dinner at the Hotel Ten Eyck. The entire membership of the Convocation was welcomed to the after-dinner speaking which began at 9.30 p. m.

The speakers and their addresses were as follows:

Address: The New Education
HARRY PRATT JUDSON PH.D. LL.D., President of the University of Chicago
Address: Education and Citizenship
WILLIAM NOTTINGHAM PH.D. LL.D., Regent of the University of the State of New York

Saturday morning, October 19, Senate chamber

Announcements

District Sup't DARWIN L. BARDWELL, New York City, for Convocation Council

Address: Industrial Education in Massachusetts

PAUL H. HANUS B.S. LL.D., Professor of Education, Harvard University; Chairman of the Commission on Industrial Education

Discussion

Rev. E. P. POWELL, Clinton, N. Y.

APPOINTMENTS

The Convocation Council acting as a committee on nominations recommended the following appointments to fill the vacancies on the various University Councils for the year 1907–8:

Convocation Council

Associate City Superintendent Edward L. Stevens, New York City

College Council

President Langdon C. Stewardson, Hobart College

Academic Council

Principal E. R. Whitney, Binghamton High School

Library Council

Frank P. Hill, Brooklyn Public Library

Medical Council

Dr Egbert Le Fevre, University and Bellevue Hospital Medical College

Advisory Council of Nurse Training Schools

Miss Annie W. Goodrich R.N., general superintendent of nurse training schools, Bellevue Hospital, New York City

Mrs C. M. Simpson R.N., superintendent of nurse training school, Albany Hospital, Albany, N. Y.

Miss M. J. Jones R.N., superintendent of nurse training school, Rochester City Hospital, Rochester, N. Y.

Miss Ida M. Root, superintendent Nathan Littauer Hospital and Nurse Training School, Gloversville, N. Y.

Dr William L. Russell, medical inspector under State Commission in Lunacy, Poughkeepsie, N. Y.

These recommendations were unanimously approved by the Convocation, and the chairman announced that they would be submitted for action to the Board of Regents at their next meeting.

ADDRESSES, PAPERS AND DISCUSSIONS

Thursday evening, October 17

The Convocation was formally opened at 8.15 p. m. by Vice Chancellor McKelway.

The following prayer was offered by Rev. Charles G. Sewall:

O Thou Almighty God, Our Heavenly Father, we acknowledge Thy goodness and Thy power, and we invoke Thy blessed presence. Thou art the God of all wisdom and all truth. From Thee cometh every good and perfect gift. With Thee there is no variableness nor shadow that is cast by turning. All that we have comes from Thee and all our best aspirations tend toward Thee. Thou art the Author of all Good and we desire Thy presence here at this time. We thank Thee for Thy mercies to this commonwealth and we invoke Thy guidance in all of these conferences. We bless Thee for the institutions of benevolence and for education which are here found and we invoke Thy assistance in all their councils. We ask Thee to preside over this Convocation, that through the personal contacts and through the mingling of thought Thy will may be done and Thy kingdom come, and with all our conclusions may we learn to know Thy will in order that we may strive to do it. We ask it through Jesus Christ, Our Lord. Amen.

CHANCELLOR'S ADDRESS

My friends, I am asked to call you to order and shall within a few minutes liberate you to the enjoyment of the program arranged for your instruction, and at any point open to your enlightening debates. The shortest address ever made to a convention in this state was in these words: "Gentlemen, I thank you for the honor of electing me to be chairman. The business of a presiding officer is to preside. Gentlemen, what is your further pleasure?"

It should be recorded that that presiding officer did not lack matter. On the contrary, he was under an embarrassment of riches of matter, as to which he did not wish either to gorge or to disgorge his cautious mind. His compacted courtesy and precision left him and the convention free to act, and secured for him the grateful and surprised commendation of relieved reporters. I am, however, under the pressure of no such difficulty, nor am I confronted with any such necessity for reserve. Our Convocation has nothing to

conceal and should have something to reveal. We need not be long the tedious, but there is no reason for us to be timid or tentative. Besides, I am under the order, so to speak, of the committee of arrangements. Their order to me is to occupy half an hour of your time, and then give way to the men who are to follow me, upon whom I do not think any such limit to language has been placed. Of course, I must obey orders. I shall have in my obedience to orders, at the outset, a justification for insisting on your obedience to orders during the progress of the Convocation, from day to day.

I am fortunate in another respect: Those who are to come after me will be expected to keep themselves within the limits of set topics. I am under no such restriction. I could say everything, or could magnify any nothing, at will. Still, I do not propose to go far afield. There are two things, upon which in succession I would speak, equally affecting us all and especially gratifying to the Board of Regents as a body, that had something to do with bringing them to pass.

The first matter to which I shall refer is the progress of arrangements for the State Education Building in this city. In a general way you are aware of some of the facts. They are, however, worthy of particular statement and of grateful record in the account of this Convocation. The Board and the State have reason to be pleased with the location of the new building. It will be near enough to the Capitol for accessibility. It will be far enough from the Capitol for freedom from the seething competitions and the conflicting aspirations or policies which within that great building, find victory or sepulture — glory or the grave. This double quality of proximity and isolation will have upon the Department of Education and upon the Board of Regents an advantage which we can predicate of our successors and which, we hope, our contemporaries will be minded to accord to us.

In this great building we have been only tenants. We have tried to be good and grateful tenants. But the premises to which we have been assigned have been as many as the stories of this structure and as remote and as disconnected from one another as can well be imagined. If we have not felt dejected, because of the kindness of the State we have felt dejected under the pressure of circumstances that could not be always adjusted to conditions of comfort or of equity, as we have regarded them. If this statement seems to be either general or obscure, I can assure you that it was my deliberate purpose to make it so.

Nor has the Department of Education been a tenant by sufferance of holes and corners of the Capitol alone. Parts of our archives have been in several state buildings and all of them in none. This is too well known to be retold to friends. It is mortifying enough to be withheld from strangers. We are very happy that in the near future the disintegration and diffusion will give way to system, to unity, to concentration and to orderly sequence. Exploration parties will then not need to be sent to State Hall. Excavators will not have to be dispatched to Geological Hall. Search warrants will not have to be procured to replevin from cellars or tenements or other remote recesses the boxed-up treasures — perhaps the boxed-up trumpery — of our educational estate.

The situation, still a while to be endured but happily soon to be ended, reminds one of what Frederick Douglass said of his first visit to Abraham Lincoln: "When I entered the White House where Mr Lincoln was, he very gradually withdrew his feet from the remote corners of the room into which they had inadvertently strayed. As I advanced, he began to rise and he continued rising."

My friends, the Department of Education, including, as should always be said, its most important organic constituent, the Board of Regents, soon hopes slowly to be gathering its scattered assets from the different quarters of this dear old city, into which they have perhaps inadvertently strayed. We can also say that the Education Building, in a sense, has begun to rise and that it will continue rising, until capstone shall be placed upon it and until we can hail and salute it with shoutings of "Grace, grace, unto it!"

A very important fact, however, should not be forgotten. There had to be one Department of Education before one building for that department could be requested or secured. When and where there were two or more departments called of education, there could only be cross-purposes, separation, discord, undermining, controversy, dishonest truces — and honest war. The new building will vindicate concentration. But before concentration there had to be consolidation. You and I know this now. All of us knew it before, but not a few of us were divided and disaffected, because some of us wanted our views to be dominant and others wanted theirs to be dominant, and we were at our tempers' end and the Legislature was at its wits end, under the apparent impact of an irresistible but discordant force upon an immovable and cantankerous object. The Legislature, which, if you please, under the peremptory pressure of enlightened politicians, arbitrarily ordained educational consolidation, did well for and deserved well of the State. Whatever the

errors of that Legislature, or of those by whom, may be, it was arbitrarily controlled, the enactment of educational consolidation was an achievement which should command for those who brought it about the gratitude and the praise of the people of the State of New York.

We of the Board of Regents must admit that, as self-constituted statutory constructionists, some of us were in doubt whether the old Department of Public Education or the still older Board of Regents was on top, in the consolidation. Whatever academic estimate of that proposition might have been possible, none was made necessary.

The Education Commissioner, in the first instance, elected by the Legislature, and the members of the Board of Regents, designated by the same body, found one another to be in such accord that contention was impossible, and a clear sense of the duty of cooperation in the interests of the State naturally followed. For the Regents, and not for the Commissioner, I wish to say right here that his judicial, unselfish, trustful and disarming spirit made him our comrade and our legal luminary, and ourselves his cordial and affectionate coadjutors. Where he begins and we leave off, or where we begin and he leaves off, will never be discernible by the present Board or by any successors in our likeness.

Best of all, we have by law the duty of selecting his successor on the expiration of his present term. That is only another way of saying that he will succeed himself, so long as he may desire to do so, and that there will be neither constitutional nor traditional opposition, whether to a second or to a third term in his case, in the minds of the Board or, as we believe, of the State.

Somewhat discursively, this leads me further to say that when the Commissioner found the consolidation of the educational forces was a fact, he addressed himself to the task of securing for the Department of Education legislation which will by evolution assure the edifice which will soon be its hive and its home. Of course, that was done suggestively, quietly, considerately and with diplomatic deference to the initiative of the Legislature and to the ultimate power of the Governor over legislation. A consequence of all this has already been set forth. When I tell you that a commanding and spacious site has become the property of the State, that a scheme of progressive appropriations has been put under way, that a representative state board of construction has been established and that an artistic harmony of the best plans submitted has been attained, then you may realize the value of what has been accomplished, the certainty that it will be carried to completion and the surety that it

will be, for centuries to come, the seat and the source of influences that will strengthen and better the powers of uplift in the commonwealth, within the republic and around the world.

What the views of the friends of education concerning this achievement are, should be those of the people at large. The proposed structure will not be the proof of the sheer importunity of the Education Department or a concession by the Legislature to rid itself of such importunity. The biblical widow who wearied the unjust but jaded judge into granting her request can not be cited as a type of the Commissioner of Education or of the Board of Regents. With want of consideration for widows we can not be charged. Of Tony Weller's aversion to them, we can not be accused. Our cause was just. Our importunity was tactful. Our appeal was to the duty of the Legislature to meet a need of the people.

Never were better reasons submitted for a public building. The Capitol, which was to be large or elastic enough to house nearly all the departments of the State for a generation, is overcrowded. The State has had the temerity to grow in population beyond the precedents or the imagination of strenuosity, whether affected by a relation to presidential preachments or to vital statistics. The expansion of government has been greater than the increase of the people, whether by unapprehended immigration or by fortuitous or premeditated fecundity. And the same people have demanded that education shall be extended far beyond the elementary stages, to which it was long confined, and that the children of the state directly or indirectly shall freely be as well schooled, either by the State or within the cities of the State, as any children of any class in the land can be at private charges. Whether this ought to be so or not, this is so, and in a commonwealth, controlled by public opinion and by public suffrage, this is to become so more and more.

I have postponed, on purpose, to this stage of this free talk the disclosure of the second important act of the State, with reference to the Board of Regents. The late Legislature devolved upon this Board the unification of examinations of qualified students of medicine and of surgery, to become practitioners among the people. For several years, three classes of medical practitioners were recognized. Slowly but strongly other classes pressed for recognition. Other classes still were forming to press for it. The State was threatened with as many varieties of medical claimants as there are of religious or sectarian claimants. The Constitution does not permit to any State any function of preacher-making, for religion is as free among the

people as trade is between the states. But doctor-making is a different matter. The preacher can tell us how to live and what to believe in this world, with reference to eternal safety and happiness beyond it. But the doctor is the chartered authority to preserve our health, to mend our injuries or to soften the ills and to temper the sufferings of mortality, when life can not be saved or prolonged.

The freedom of the citizen in religion and the responsibility of the state for doctor-making suggest a distinction that is obvious. This State made notable advances in medical education, years ago. It took away the power to commission physicians and surgeons from the institutions in which they received their education. The interest of those institutions in admitting their students to practice was greater than their interest in keeping the unfit among their students from admission to practice. This need not be said for censure. It is simply the result of what may be called the infirmities of human nature. The State found this so, when it assumed the sole power finally to examine and officially to commission physicians and surgeons. The State set the standard and indirectly the State appointed the examiners.

Last winter, the Legislature ordered that the indirect appointment of medical examiners by the State should cease. The State ordered that the examiners should be appointed by the Board of Regents; that the standard of qualifications should be uniform, and that those who pass such examinations should be State authorized practitioners of medicine and of surgery, and that none others should be permitted to become such practitioners. This was a radical advance. It was necessary to protect the people from what we may call medical ignorance and surgical sciolism. Not that the State cared to which school or to which alleged school of practice those who attained licensure might afterward incline. That was their business. To prefer them or to discard them was within the option of the people. It was the duty of the State to provide educated practitioners and to protect the people from the admission of any other kind to licensure.

This has been done by the act already referred to. The Board of Regents have appointed medical examiners and those examiners are at work. Their examinations will be uniform, impartial and scientific. Those who pass them will be the only qualified practitioners of medicine and surgery within this commonwealth, in the near future. It is safe to predict that in that near future, few practitioners will be minded to call themselves by any other titles than "doctor" or physicians and surgeons. The labels that are now

used will not, during many years, be especially significant. The dropping of them by the end of this generation may reasonably be expected.

The Regents very wisely selected the medical examiners from the various schools of practice within the State. They very wisely limited their selection within those schools of practice to those who had received a medical education on the line of the highest former standards, and likewise to those who believed in the new law and who had not endeavored to defeat it. The system was put to nurse to its friends. Its fate was not farmed out among its enemies. The justification of this has been found in the approbation of all branches of the medical profession and in the approval of the people and of the press, as the interpreter of the people. The terms of these examiners are three years, two years and one year for the purpose of securing recurrent designations, as in the case of the other state boards. Possibly for this generation, indirect cognizance will have to be taken of former divisions of medical instruction and practice, but hardly for longer than that. Educational sectarianism in medicine will cease, as medical sectarians die off, and a uniformity of standard, steadily maintained, will enable a uniformity of selection to be made, when the reasons for and the representatives of sectarian medical education shall both have passed away.

No bar has been raised against any kind of medical or surgical practice. Only a single standard of assured intellectual, educational and, as far as can be ascertained, moral fitness has been established. To that there must be conformity. Subject to that, as already intimated, the law is liberty. There are not a few schools or pseudo schools of education and of practice that may clamor for admission. Admission will be as open to them as to others, but always under the one standard of character, education and fitness which the State has peremptorily and, I believe, permanently, set. That standard will bar none. But none will be able to lower it or to trifle with that standard. Passing it, any graduates can practice what methods they please or cater to the idiosyncrasies of patients, as they please. Of course, as the educational standard of practitioners is raised and maintained, so will the judgment and sense of patients in proportion be increased. The credulity on which quackery subsists will be ended when quacks are outlawed.

This is real reform. This is a genuine advance. While this was, at the last, suddenly accomplished, it was the result of long study, long effort and of a long experience of the State with other methods The Board of Regents was highly complimented by the State when

the State made it, through its medical appointees, the clearing house for medicine and surgery in the future. The excellent recognition of what may be called existing schools, and the more extended recognition of schools or systems which may spring up, subject to the one standard of knowledge, character and efficiency, can not be too highly praised. All can come in that should. None can enter that should not.

How carefully and, withal, how slowly the State moved should not be forgotten. It shifted the center of power to credential doctors from over the heads of medical schools to the agents of the State. It made a doctor of any school thereafter a state product. He was a medical college pupil, but as a doctor he became, though not the product, the creature of the State. New York early led off in this. Other states then assumed the control of doctor making, in the final stages. The standards of the states differ, but the standard of New York is the highest and will become the standard of all other states of the first class.

The first act of our State was to establish for all intending surgeons and physicians a uniform degree of primary instruction. The State then saw to it that the different schools of medicine or surgery, or both, as nearly as could be, established a uniform degree of direct medical instruction. From that to the provision of this uniform educational standard by the State itself and to the credentialing of doctors by the State alone the course was natural and, though slow, was progressive and inevitable.

I have no condemnation to pass upon those who opposed this. Opposition is necessary to attrition. Attrition is the spur which carries progress to the front. It is the provocative to discussion. Discussion carries in it the certainty of the discovery and of the adoption of what ought to be and of what, having been obtained, endures. It was not for the Board of Regents to make this advance. It was fitting that the Board should urge it. It was fitting that the Commissioner of Education, as the voice of the Board, should urge it. This he did. Him the Board sustained. To him and to the Board the Legislature listened. From the Legislature to the Board has come the order for this advance. By the Board the order will be obeyed and, through the Board, the advance will be maintained.

It is well this is so. Our Board has always respected the orders it has received from the Legislature. We are limited by those orders. Some we have not sought. Some we have not desired. None have we ever declined. All we have loyally obeyed. The

Board, legally authorized and protected by the constitution and personally named by the Legislature, is both loyal and logical in obeying the will of the Legislature. The Legislature knows that to the Regents in medical or in other education can be safely left the execution of the will of the State. The Regents have seldom looked to the Legislature in vain. The Legislature has never leaned on the Regents in vain. This advance in medical education, though far from the last is also from the least requirement the lawmaking body has laid upon us.

The older members of our Board have seen and the younger members have learned of many advances which education has made in this great State. The State established normal schools and normal colleges against the contention that " To teach teachers to teach would be as absurd as it would be to teach mothers to nurse, or children to play." Well, teachers are now taught to teach and, until they have shown their capacity both by knowledge and practice to do so, they are not allowed to teach in the schools of the State. Mothers continue to nurse, but many mothers of the overworked poor are now intelligently taught how to bring up their children amid cleaner and sweeter surroundings than used to prevail and their children are even tenderly cared for, amid clean and sweet surroundings, while the mothers are at hard work in congested city centers. The children of the slums are gathered in kindergartens or in playgrounds. They are even tenderly taught how to play, instead of leaving the instinct for play to be outworked amid conditions of confusion and of dirt and of barbarism which combine to make for sin. The Saviour and Lover of little children has touched city, county, state and national life, and the human heart, with His sublime spirit. From the kindergarten at the basis to the university as the apex of our educational system, enlightenment has brought change. Change has signified progress and progress means tomorrow. The State is bound to complete and to perfect what it begins, for the moral and the spiritual law, in pursuance of which the State consciously or unconsciously acts, is bound imperceptibly, invisibly and irresistibly, to have its way in the heart of things and in the hearts of men. In this is not the socialism that levels down. In this is the spiritual regnancy which levels up.

Government is the ultimate of public opinion. The laws that cross that opinion are changed. Constitutions in its way are amended or interpreted in line with it. If few things are slower than the progress of public opinion into law, nothing is surer than that progress. The trend of such progress is today manifest. Gov-

ernment is minded to do for the people several vital things it has heretofore left to private initiative. In the light and under the force of the steady pressure of this ethical time toward better conditions, should be judged and can be forseen the manifest duty and destiny of the State to take much of the higher education, as it has already taken nearly all of the primary and secondary education, into its own hands. Those hands, government of the people will make strong. Those hands, government by the people will keep clean. Those hands, government for the people, under the purposes of God for America, will make and will keep gentle and tender and tolerant, as well as strong and clean.

THE PUBLIC SERVANT

BY PRESIDENT JOHN H. FINLEY LL.D., COLLEGE OF THE CITY OF NEW YORK

[We are obliged to announce with regret that this address can not be printed in the proceedings, as it was mainly extemporaneous, and no notes were taken, or paper submitted.]

The Chair — There is a tradition that North Carolina and Rhode Island, which were the last states to adopt the federal Constitution, respectively acted on the suggestion of Jefferson and of Hamilton in the work of delay; that the object of these statesmen was to get 11 states to ratify the Constitution, enough to set the government going, and then to keep the two remaining states of the original thirteen colonies out long enough, till the necessary additional amendments could be secured. Whether Jefferson prodded North Carolina and Hamilton, Rhode Island, I do not know. Tradition is to that effect. But we do know that part of the honor of the state of Rhode Island was the establishment of her system of education; and of that system Brown University is the head, and the Rev. Dr Faunce is the head of Brown University.

THE HUMANIZING OF STUDY.

PRESIDENT WILLIAM H. P. FAUNCE D.D. LL.D., BROWN UNIVERSITY

Whatever the occasion and whatever our theme, we are sure to find a point of departure in the vast treasure-house of Robert Browning. Tonight we begin with part of his poem called "Development:"

> My father was a scholar and knew Greek.
> When I was five years old I asked him once:
> "What do you read about?"
> "The siege of Troy."
> "What is a siege, and what is Troy?"
> Whereat
> He piled up chairs and tables for a town,
> Set me atop for Priam, called our cat
> Helen, enticed away from home he said
> By wicked Paris, who couched somewhere close,
> Coward puss . . .
> This taught me who was who and what was what;
> So far I rightly understood the case
> At five years old; a huge delight it proved,
> And still proves — thanks to that instructor sage,
> My father, who knew better than turn straight
> Learning's full flare on young-eyed ignorance.

In these few lines we have interest, effort, apperception, correlation, concentration, and all the other processes and principles which have become the shibboleths of modern education. But we have them embodied in a father instead of a pedagogue, who made the living room a schoolroom, used chairs and tables instead of pictures and casts, and gave the growing boy not paradigms and conjugations, but a lifelong "huge delight."

This simple natural way of imbibing knowledge and enthusiasm from a father or a friend is of course the ideal of education. In the Republic of Plato the father who wishes Socrates to instruct his sons simply says: "Please let these young men have the benefit of your society." In modern England some of the greatest minds like Mill, Ruskin, Spencer have thus been educated mainly through the home, and have owed little to formal school training. There is something artificial and unreal in the very idea of the school. The school is a group of young people withdrawn from the natural grouping of the family and the community, and fashioned into a necessary but artificial grouping according to age and ability. The schoolhouse is an unnatural structure which an ideal society would not possess. "I saw no temple therein" is the apocalyptic description of the heavenly city. With equal justice the writer might have said: "I saw no school therein." In ancient Athens education apparently involved a going to school in earlier years, but the greater part of education was by conversation and discussion in the open air. One of the most hopeful signs of our times is that we are beginning to recover the Greek ideal and through nature study, athletic sports, and summer schools are beginning to see that no hygienic schoolhouse can be any true substitute for "God's great outdoors."

But study itself, wherever pursued, has a constant tendency to become abstract and inhuman. It inevitably involves a temporary withdrawal from reality, and a segregation of certain parts of experience.

The formulas of mathematics, so essential to all exact investigation, are mental constructions in a purely hypothetical world. It is only in Euclid and his followers that the three angles of a triangle are equal to two right angles. Actually no surveyor has ever found them so in any piece of ground. Hence the purely mathematical mind is notoriously unfitted for grappling with events and objects in daily life, and mathematical reasoning affords no guidance whatever in the drawing of social and moral inferences, or ascertaining truths in the realm of the contingent and the probable. "The

mathematical spirit" said Fouillée, "is the art of seeing only one side of a question."

The division of the materials of physical study into different sciences is necessary but unfortunate. In the real forest there is no division into fauna and flora, into geology, botany, and ornithology. These artificial divisions we impose for the purpose of study, just as the anatomist dissects out a single nerve in order to understand it. But he is in constant danger of seeing only the nerve and forgetting its union with the body.

All propositions, formulas, expositions, are attempts to express the ever baffling reality in terms of intellect. But in all ages, the perfunctory teacher and the stupid pupil never get beyond the intellectual expression, the juiceless formula. In all ages the multitude have received the formula as a finality and so education has sometimes closed their minds and deadened their spirits. How often this was the result of the scholastic education of the middle ages we all know. The schools were as Comenius called them, "the slaughter-houses of children." Scholasticism exhausted itself in laborious subtleties, and its boasted scholarship, removed from any study of facts, was a castle in the air. The old trivium and quadrivium whetted indeed the reasoning faculty, but gave no material on which to employ it. Disdaining studies which might ameliorate the life of the common people, the medieval teacher endlessly discussed the interior structure of the Paradise, or the number of angels that might stand on a needle's point.

The revival of learning, the sudden efflorescence of classical study, swept away the old scholastic rubbish and filled the universities with a superb enthusiasm. "Bliss was it in that dawn to be alive." Into the stagnation that had gathered around school and church came the great impulses and aspirations of the age of Pericles and the reign of Augustus with transforming power. To commune with Homer, Plato, Virgil, Cicero, was to experience a rebirth. The intellectual life of Europe was re-created by classical study and that impulse has endured to the present day.

But have the classics always thus been the bearers of sweetness and light in the last 400 years? Let the millions of schoolboys who have been compelled to grind in the prison house answer. For many of these millions, syntax and prosody have made acquaintance with the Greeks and Romans impossible; for millions of students Virgil has been merely a series of illustrations of the lexicon, and Cicero an obliging commentator on Harkness's Latin Grammar. The decadence of the Greek language as an instrument of culture today

is not wholly due to the encroachment of more modern studies. It is in part the Nemesis of devitalized instruction, the inevitable result of degrading the most luminous writings of the ancient world into mere engines of formal discipline. "We have murdered to dissect." We have "parsed" Caesar and Xenophon until they are no longer living spirits to our boys, but are mummies dessicated and horrible. In our higher schools classical philology is frequently as technical as any course in "chipping and filing," and much farther removed from genuine human interest.

Now our best classical teachers are making strenuous and successful efforts to humanize the study of Latin and Greek. They are refusing to observe the so called golden rule: "Teach unto others as others taught unto you." They are bringing students into contact with coins and marbles and inscriptions and all the utensils of a buried life. They are transferring the methods of the scientific laboratory to the classical seminar. They are carrying their advanced pupils to Athens and to Rome. They are using the language as a mere channel through which to reach the national or racial life. In spite of the inhuman college entrance examinations which inevitably tend to depress every secondary school into a cramming machine, our best teachers are really giving our boys and girls a glimpse of the ancient spirit and ideal. But that glimpse must be made possible for students in nonclassical courses. One of our most pressing needs is to make clear to nonclassical minds the great inheritance that has come to us from Greece and Rome, just as we have made the literary and religious bequest of Israel known to millions who are innocent of Hebrew.

So in the modern languages we are reaching out for better and more inspiring methods of instruction. Perhaps the heaviest responsibilities in modern education rest upon the teachers of English and French and German, since the training in coherent thinking, careful discrimination, and precise expression which was formerly gained by study of the classics, is now largely transferred to departments of modern language. But our teaching of English not only is ineffective, it is positively destructive of real appreciation of the treasures of our English tongue. Happily the amount of time spent on technical grammar has been diminished, and teachers of rhetoric have more "bowels" than once they had. But the daily theme writing, often forcing students to talk when they have nothing to say, seeming to affirm that quantity of output somehow leads to quality of style, and substituting the blue pencil for the living voice, has in some institutions become a mechanical and soulless routine.

The study of the masterpieces of our English tongue often leads, as we all know, to an aversion in the mind of the student which lasts throughout life. Our college graduates are frequently illiterate and unshamed. The elaborate mechanism of instruction that we have built up in the American college does not create the thing most needed — sincere admiration and lasting delight. Our English speech is mastered by Oxford graduates without any of our years of painful and vexatious drill. Of course Oxford is dealing with a different class of students, selected from the finest English homes, with centuries of culture behind them, while we are dealing with a great democracy, many of them from homes where good English was never spoken. But our trouble lies not only with the sons of artisans and immigrants, but with the sons of the refined and educated. We are graduating men who not only can not write a decent letter, but who take no pleasure in any literature beyond the flotsam and jetsam of the news stand. Oxford has no entrance examination in English nor any courses in English required after entrance. When I said to a professor in Balliol College: "How then do you teach English here?" he answered "Your American departments of English are killing the love of the mother tongue; we believe that good English, like good manners, is acquired simply by associating with those who already possess it." I know that the small group of men in an English college presents an essentially different problem from a freshman class of from three to five hundred, where the theme and the blue pencil and the fortnightly and the forensics and fifteen minutes of forced consultation are all parts of an apparently necessary but highly impersonal apparatus. But is it surprising that the elaborate schedule, the large force of clerks and assistants, the "theme readers" whose deadening task it is to correct the speech of hundreds of students they are forbidden to see or hear — is it surprising that all this cumbrous mechanism fails to kindle intellectual fire? "How can you bear," said one college senior recently when urged to write for a college daily, "how can you bear to push a pen over sheets of paper when you don't have to?"

I firmly believe that Oxford is right — good English is mainly the result of association with those who have it. It comes by contagion and not by drill. We learn to talk well, just as we learn to talk at all, by listening. Good English is a part of courtesy and honor and chivalry. It is not conformity to the rules in a textbook; it is conformity to the gentlest and noblest spirits around us and before us. It is the manner in which the best men and women

approach one another for intellectual and social exchange. If such men and women prefer the split infinitive, then the split infinitive is right; if they abhor it, it is wrong. If they want reformed spelling, then we should have it; if they don't want it for a century to come, good breeding will keep us from attacking their usage. To spend four years in association with a group of men who delight in the English tongue and daily exemplify its varied powers, is the best possible course in "college English."

Many of our teachers are questioning the effect of our constant approach to English masterpieces by the method of the dissecting table. When the unresisting "masterpiece" is laid out before the class, and they pick out one filament after another, when they have determined the origin of every historical and mythological and geographical allusion, do they, as a result, love the "masterpiece" or hate it? Are their imaginations kindled, their spirits "stabbed awake," and the fountains of delight unsealed? Or do they view the poem or essay as a cadaver which they were driven to carve and rend? Professor Nettleton, who has recently written strongly — none too strongly — out of his own large experience, quotes the student who told the story of his English course as follows: "We took Milton line by line, and the teacher explained away every illusion." But is it necessary to explain away in order to communicate the thrill of genuine delight? Is it necessary to apply spectrum analysis to every star before we can understand Jessica's cry

> There's not the smallest orb that thou beholdest,
> But in his motion like an angel sings?

The trouble is that appreciation is difficult to communicate in formal lectures, while knowledge is easily packed into 50-minute periods. Therefore we impart the unimportant knowledge, and the glow of feeling, the flash of insight, the illumination of the world which comes at the touch of Shakspere or Keats or Tennyson — that we seem to resign all hope of giving away. Thus we tithe mint, anise and cummin, and pass over the things that make men live.

Ever since I was a child my imagination has been dominated by the three sonorous lines of Milton:

> High on a throne of royal state,
> That far outshone the wealth of Ormus or of Ind,
> . . . Satan exalted sat.

Whenever I have come face to face with the audacity and insolence of evil, whenever I have seen villainy assuming regal airs and

powers, I have remembered the great Miltonic figure in his arrogant magnificence. Yet,— must I confess my ignorance before this company? — I have an extremely hazy idea of the meaning of "Ormus." Was it mountain or river or province? To confess still further my abject condition, I have no particular desire for further information regarding Ormus, feeling dubious whether I could long retain such information if I had it. I know that Milton chose the word because it is a musical, mouth filling syllable, whose vowels make such rich harmony with those that go before and after in the sounding line; and to feel the marching meter and be permanently enriched by the vision of demoniac defiance is more to me than to know the latitude and longitude of Ormus, or the population of its capital.

When we read *Romola* or *Ivanhoe,* we are not seeking knowledge, and should frankly admit it. Our entrance examinations treat the literature of power as if it were the literature of knowledge and seem to hope that callow youth by picking it to pieces will learn their secret. A report from the weather bureau may indeed be treated in this way. It may tell us that an area of low barometric pressure is moving eastward from the Mississippi and that the wind is blowing at 45 miles an hour. The same kind of storm is described in the 29th Psalm — but how differently! "The voice of the Lord breaketh the cedars of Lebanon, and strippeth the forests bare, and in his temple everyone is crying 'Glory.'" The latter description is far nearer the facts than the former, for it is qualitative, while the report of the weather bureau is purely quantitative, excluding all reference to the world of spirit. The weather bureau rightly deals with causes and effects, and excludes motive, purpose and ideal. Yet it is in the realm of motive, purpose and ideal that man finds himself, and achieves his great service to the world. Unless literature is to sink to the level of a barometric chart, it must be dealt with in school and college as primarily a source of insight, passion and power. The only way to feel that power is vitally to touch the man who already feels it. Here the only possible education is by contagion.

But the same necessity appears in other departments of study. Recently I asked a brilliant young college woman, just finishing her junior year in college, what study she enjoyed most. She readily answered "Psychology," and I was delighted at her obvious philosophic bent. "What part of psychology did you most enjoy?" I continued. With equal readiness she answered: "Altogether the most interesting part of our psychology was studying the space

sensations of mud turtles." Now we all recognize the profound service of comparative psychology; we are glad of the objective methods which supplement the old introspection. But if to our students the central problems of psychology are not in the region of human attention, habit, volition, emotion, but are in the movements and sensations of reptiles, are we not again dehumanizing our study? Such study at least should be dissociated from philosophy and induced frankly to own its closer kinship with physics, physiology, and zoology.

In history most of us were put through a discipline that produced a stinging resentment which still rankles within. In the best New England schools of 30 years ago we recited in concert long lists of meaningless dates, or memorized a textbook which was in itself a lifeless manual. Happily this has now changed. The dates have largely fled to the margin or the appendix, and the drum and trumpet story has given place to biography and the tracing of the development of homes and occupations and institutions. History has been humanized in the public schools — but not yet in the universities. There the dominant school of thought is never weary of objurgation of Gibbon and Macaulay and Froude and Carlyle, while the annalists are at the front demanding that human interest should be banished in the name of scientific method. After listening to many a historical lecture we turn with grim satisfaction to the statement of Frederic Harrison: "It is certainly not true that a knowledge of facts merely as facts is desirable. Facts are infinite, and it is not the millionth part of them that is worth knowing. What some people call the pure love of truth means only pure love of intellectual fussiness."

In the study of physical and natural science we surely should be in touch with reality. In the nature study now so popular lies deep culture value. To get close to nature is to acquire not merely knowledge, not only physical health, but sanity and poise and patience, and sense of law and order and beauty. The introduction of scientific study has revolutionized education and produced a type of mind wholly opposed to the type produced by the scholastic discipline or on classical study. The intellectual texture of a Tyndall or a Huxley is distinctly different from that of a Newman or a Gladstone. Science has given to the modern world a new sense of the value of truth, has turned man's eyes outward from himself, has made him master of his physical environment. It has taught us to observe closely, classify logically, and has exalted that inductive reasoning by which men must always guide their daily life.

But must we not confess that here also a certain inhumanity has crept into the work of both teacher and pupil? Have we not attempted to cram into textbooks for little children an entire scientific system? Is not the child frequently lost in a maze of definition and classification? In my early days the school geography began with definitions of the ecliptic and the equator. Then we advanced to the western hemisphere; a little later to the continent of North America. Then we learned the states of the Union and how to bound them. Then we studied the New England states and were just about to take up the part of Massachusetts where we lived, when the summer vacation came and we had no time to become acquainted with our own home. A friend of mine who was put through the same method lived as a boy beside a small stream. In the spring it overflowed and a little tongue of land projected into it. Suddenly it flashed upon him that that little piece of land corresponded to what was called in the school geography a "peninsula," and which he supposed existed only in books. He ran into the house with all the joy of discovery, crying: "I have found it; I have found a real peninsula!"

Such things are improbable today. The sand maps and reliefs and outdoor expeditions have correlated geography to the daily vital experience. But still our textbooks err in crowding the university outlook upon the primary school. As Mr McMurry says: "The strong tendency of textbooks in natural science to be systematic (i. e. to give the outlines of a system) almost completely destroys their value for the common school." Endless analysis can not feed the growing mind of the child. Too much technic at an early age is not uncommon. The story of the plant life is vastly more important to the child than its classification. Real study of nature must not fail to touch the emotions, to refine the taste, and unconsciously feed social and moral impulse.

In the higher schools and colleges the same danger is present. Usually a course in science totally neglects the history of the development of human knowledge in that department. It has not time for the biographies or achievements of Linnaeus or Faraday or Pasteur. It disdains any general view of the subject, as necessarily superficial. It often forces a crude student into extreme specialization, and sets him grubbing in remote corners of the subject where large horizons are quite impossible. From such research all social and ethical inspirations are excluded as an *ignis fatuus*, and the mind may move with an arid and rigid precision which is

either more or less than human. Such a mind is typified in Browning's grammarian, who

> Could define the enclitic *de*
> Dead from the waist down.

Now what do we need? It is not pleasant to play the part of Cassandra, still less that of Thersites. But it is necessary at times to bring out in clear relief the abuse of studies we all honor and prize — since "the corruption of the best is always the worst." What do we need to make study more genial, more representative of man's entire nature, more truly human?

First, we need to emphasize the world of appreciation as well as the world of fact. The realm of reason and purpose, of character and volition, of aspiration and resolve, is for all of us far more real than the world of cause and effect, of force and formula, of materials and things. The world of ideals and qualities means far more in human life than the world of substance and quantity. The feelings are in the evolution of the race far older than the intellect and more powerful. To respond to the beautiful, the good, the true, instantly, decisively, permanently, to be at home with all noble utterance and achievement, to feel the suasion of great souls and have fellowship with them, is far more than to heap up any facts or classify any objects.

Here Greek education was peculiarly efficient. It is our standing wonder that the Greeks, having so little to teach with, could teach so well. They had no foreign languages, ancient or modern, no science as we understand it, no history save their own, only elementary mathematics, literature, music, and physical training, and yet they fashioned men we can not surpass. Their education was largely in the realm of appreciation, it dealt with the social, ethical, political, artistic, and it produced marvelous men.

Second, I need not say to an assembly like this that we must in education address the executive as well as the thinking powers. Manual training is distinctly humanizing, in that it restores the union of hand and brain which should never have been put asunder. Teaching a child to work with his hands is surely one of the humanities; it unites again intellect with feeling and action. The farmer's boy of 50 years ago did not suffer from the intellectualization of study, because three fourths of his training was in action. President Hall has traced 70 different trades or occupations that were practised on an old New England farm, and in most of these the boy had some part. The district school might be poor enough, but

the farm life was rich in materials for producing vigorous versatile self-reliant manhood. Now to the city boy we are trying to restore the lost materials of social and moral education. Precisely those qualities which the New Englander derived from the mastery of his stony hillsides, and the Virginian derived from raising stock or cultivating his plantations, those are the qualities which somehow must be given in and through the modern school. "The subjects taught in the country schools" says Professor Bailey of Cornell, "are not the essentials. The school does not represent or express the community. I do not know that any schools teach the essentials except as incidents and additions here and there, and essentials can not be taught incidentally or accidentally. Arithmetic and like studies are not essentials, but means of getting at or expressing the essentials. The first efforts of the school should be to teach persons how to live."

Third, we must regard all knowledge as the product and servant of the spirit of man. Things are of value just in proportion as they have spiritual uses and are shot through with meaning. Every study may thus be viewed from the human standpoint. Geology may sink to the level of the study of paving stones, or it may rise to an explanation of the migration of nations and the development of races. Botany may be made a mere wearisome analysis and chasing of Latin names through a book, or it may minister to art and agriculture and medicine. Chemistry may be a mere list of elements and compounds with their symbols and reactions, or it may be a glimpse into the constitution of the universe and a guide to industry and human progress. The vocational aim is not necessarily at war with the academic spirit. All our New England colleges were founded with vocational purpose, the direct training of young men for certain professions. Indeed the vocational aim rightly understood may save us from unreality and fog. Truth is not worth seeking unless it ministers to life, and all truth that does so minister is rich in material for culture. The greatest scientists are not mere marvels of erudition or generalization. They are intensely human. Pasteur's great discoveries were all the result of patriotic devotion to his country and true love for his suffering fellow men. Because the peasants of France were starving he studied the habits of the silkworm; because he saw children in convulsions he sought a cure for hydrophobia. The affectional side of his nature, his tenderness to his wife, his ambition, combativeness, power of anger — these things supported his scientific intuition and made it effective. One of his last utterances was "I am sorry to die; I wanted to do more

for my country. The scientist's cup of joy is full when the result of his observation is put to immediate practical use." Out of such a full, deep, rich nature, "out of the burning core below," came the impulse to scientific research. Such a nature was Agassiz, whose monument is all around us in America. The finest scholarship of the world springs from a red-blooded humanity, and its methods in school and college should appeal to the entire nature of human beings.

Fourth, and above all, we must exalt personality above mechanism in school and college. As I visit the superb new high school buildings recently erected in various cities, I feel a strange mixture of pride and regret — pride in such lavish expenditure and mammoth apparatus; regret that hundreds or thousands of pupils must be thus herded under one roof, and that the vast expenditure is not for teachers, but for marble vestibules and ventilating fans, and electric clocks and bells, and admirable ovens and lunch counters, and all the devices which are forever desirable but forever subordinate in true intellectual growth.

And the school principals may well make the retort courteous as regards our universities. We are profoundly grateful for the libraries and laboratories, the halls of literature and science that have arisen in many places as if at a touch of a magic wand. But the question steadily presses whether we are still masters of our materials and able to keep the soul on top. The remedy is not to be found in less material, but in larger spiritual wealth. In Germany the leading university professors are far better known than the institutions they serve; in America we think first of the organization — of Princeton, Chicago, Wisconsin — and only secondarily of the men who make the institution what it is. But we shall in due time grow up to our equipment — and students will resort to Pennsylvania or Leland Stanford, not because of any gymnasiums, or pools, or memorial gates, but because they there come under the instruction of men who are guiding national action and shaping the national ideal.

The university is a fellowship of scholars, and participation in the fellowship is higher education. The older Oxford ideals, replaced for the last 30 years by German ideas of vigor and rigor, are coming again to their own in America. The most interesting experiment in American colleges is that made the last two years at Princeton, where 60 new preceptors were added to the faculty at a blow, these men being chosen primarily for their human quality and sympathy with young manhood. Whatever the defects of

such a system, it certainly exalts personality in teaching, and allows time for the study of individual students. It makes students, and not departments or courses, the center of university attention. The old farm labor of a former generation in New England was labor in association with men who knew their calling and could teach it. The old apprentice system was toil in association with master workmen. The lawyer or doctor or minister then learned his calling by association with older and wiser men. There is no other way to learn anything. Back of all books and buildings and curricula and examinations and pageants lies the contagion of great minds as the sole quickening power, the one irresistible and undying force in education.

One of our colleges that has borne an honored name is now facing a certain aspect of this question. It has been offered from one to three million dollars on condition that it pledge itself never through all future centuries to allow intercollegiate sports. We at a distance know too little of the situation to utter any final judgment as to what were the reasons for such a unique bequest or what would be the local effect of such stringent prohibition. The real question lies far deeper. It is this: Shall any American college for the sake of any gift whatever, part forever with the power to shape its own interior life? Shall it secure ample endowment by a sacrifice of autonomy? Shall it be compelled to say through all the centuries, "We are prohibiting what we believe to be desirable in the life of young men, we are enforcing rules that we inwardly repudiate, solely in order to keep the treasury full?" If such a bargain is struck, will we not soon have the announcement of other millions to other colleges on condition that free trade or the doctrine of evolution or the higher criticism shall never be taught within those walls? What a superb victory would it be for academic freedom, for the triumph of soul over materials in education, if just now it could be forever settled that no wealth, however great, can purchase power of control in our colleges! Those who give to an institution should trust it to unfold its own life. They should endow it, if at all, in the spirit of generous confidence, realizing that a living organism must develop from within, and must remain intellectually and socially human and free if it is to serve the republic.

Have we spoken critically this evening? Who have clearer right to point out weaknesses in education than those who are giving their lives to its service? Thousands of teachers fully realize the truth of much that I have said and are striving daily to put it in

practice. Never before, I believe, was the training of youth so effective, all things considered, as it is today. Our system of education is worth attack. Steadily abuses are being corrected, the shadows are departing, and the sun rises.

Not by eastern windows only,
When daylight comes, comes in the light,
In front the sun climbs slow — how slowly!
But westward, look! the land is bright!

Friday morning, October 18

THE PROVINCE OF A MUSEUM OF ART IN A SYSTEM OF PUBLIC EDUCATION

SIR C. PURDON CLARKE F.S.A., DIRECTOR METROPOLITAN MUSEUM OF ART, NEW YORK CITY

The Metropolitan Museum of Art, of New York, occupies a peculiar position, and one which must be fully understood before any attempt should be made to define its relations and duties toward the State, the city and the public.

Originally a private institution, its collections — principally pictures — were housed in a private residence, and supported by a society of gentlemen whose principal object was to elevate the masses by interesting them in the study of art. Art, a word which, although one of the shortest in our language, yet contains more disputed meanings than any other in our full vocabulary.

So warmly was this museum movement supported by gifts and bequests, that these gentlemen were compelled, in 1871, to claim assistance from the municipality of New York towards the housing and care of the collections, beginning with a red brick building in Central Park covering 103 feet by 235 feet (24,205 square feet), finished in 1879. A few years later it was found necessary to ask for further accommodation, and last year a plan was approved for the extension of the building north, west and south, so that when finished it will be one of the largest in the world and enjoying, even at present, the largest endowment of any similar institution. The buildings, past and future, are provided by the municipality, and, when completed, will have cost over $10,000,000. The cost of maintenance and salaries of the staff is also met by the city up to a sum of $200,000 per annum; both large sums, although only in due proportion to the $6,500,000 endowment due to the munificence of private people who, in addition, presented collections worth several millions of dollars.

When called upon to undertake the direction of the Metropolitan Museum, I was not aware that the State had any claim to influence the policy of the board of trustees in the development and accomplishment of the museum collections. Nor to the present has any indication of such a claim been made, but from several quarters

I have been asked to engage the museum in obligations with respect to teaching organization, and it is for this purpose that I accepted this opportunity of publicly stating how far I was prepared to recommend to the trustees that certain facilities should be given to professors and public instructors, always without detriment to our general scheme for the development of a great museum.

A glance at the museums of Europe shows that in the principal capitals there is a vast amount of wasted effort in the matter of museum organization, and that, owing to the want of sufficient forethought, each city is supporting several museums, where one would well serve all requirements. But in each case the same history is repeated, an original government museum directed by erudite savants of great reputation amongst their own circle of friends and enemies, but wholly out of touch with the people, and often distinctly antagonistic to the modern art craft trades, which in any way are engaged in the manufacture of the same class of object, as to whose history they have devoted a life study, and with respect to some people of antiquity hundreds, or even thousands, of years ago.

In England the government was, most reluctantly, forced, in 1856, to create the Industrial Art Museum at South Kensington as the depot for art examples of all periods for the use of the Government School of Design, and, afterwards, extended to the art schools, now over 300, scattered throughout the United Kingdom of Great Britain, Scotland, Ireland and Wales.

Germany followed, and about 10 years later the Kunstgewerbe Museum, of Berlin, was organized, and, similarly, at Vienna — already possessing a museum of antiquities — a Kunstgewerbe museum was established, closely followed by a Handels, or trade, museum, in order to include modern works of art which the esthetic susceptibilities of the Kunstgewerbe Museum officials would not accept. In parenthesis, I may add that a few years back, at the death of the director of the Kunstgewerbe Museum, Herr von Scala, the director of the Handels Museum, was appointed to succeed him, greatly to the benefit of the Kunstgewerbe Museum.

In England the South Kensington Museum, founded in 1856, went through a checkered existence, the successive directors, all actuated by broad principles, having to maintain a constant war with the ruling administration, the Council, now the Board of Education. The same difficulties respecting the illustrations of modern art (always opposed by academically trained museum

officials) were surmounted by the making of a branch museum at Bethnal Green, the Bowery quarter of London, the center of the furniture manufacturer's trade, where was sent the cabinet by Fourdinoie, the masterpiece of the French Exposition of 1857, and probably the finest example of cabinet work ever made in any country.

In France the want of an industrial museum was felt as early as 1865, and several gentlemen of wealth and position associated themselves to purchase examples of art work of all periods, preferably the 18th century, when art in France reached its zenith. It required 40 years to obtain proper government recognition, and in the year 1905 only, were the superb collections of the Musée des Arts Decorative installed in the north wing of the Louvre under a separate administration directed by one of the original founders, M. George Berger, whose early training was greatly influenced by his research work for the South Kensington Museum in the sixties.

Returning to England, I can instance the further want of forethought in the government's dealing with its national collections of paintings, where narrow-mindness has ruled to such an extent that the picture galleries at South Kensington, presented by W. Sheepshanks, the National Portrait Gallery in Trafalgar Square and the Tate Galleries at Millbank, all contain collections, which, if united together with the National Gallery and the Wallace Collection, would equal any of the galleries of Europe; but the opportunities were lost through the want of sympathy of the ruling powers of the National Gallery with each of the great private collectors, who were thus forced to bequeath their collections as separate units to be kept apart from the National Gallery forever.

Of all these institutions, so far as I am aware, the South Kensington is the closest in touch with a government educational system, although its scope is limited to giving assistance to several hundred art schools by the loan of art objects, or rather reproductions of standard works and photographs of the same, as original objects can only be lent (except under very exceptional circumstances) to such institutions as possess a public gallery always open to the public. No attempt is made to interfere with the direction of the teaching in any one of these institutions, but, as far as possible, to supply their wants in every class without considering whether the objects they select are of good or bad style.

On the broad principles of educating the public by esthetic influence rather than by actual instruction, very generous loans of

original objects are made for a period of twelve months to every local museum in the United Kingdom, where the authorities have sufficient space and are able to undertake the responsibility of the charge. Of these there are 90, some few being attached to the government school of art of the town or district. Another department has gradually, and without any government origin, been established, and this is a large collection of stereopticon slides of objects in the museum, which are available for loan to the various institutions, museums or schools, and these are very largely in request by art masters and lecturers, who obtain them on loan by paying half the cost of postal carriage to and from London. Unfortunately this great museum has to the present no definite scheme for the arrangement and classification of its collections, and is precisely in the same position as the Metropolitan Museum of Art in New York, which halts between two schemes, each good, although thoroughly antagonistic to the other. The first is that which the educationist naturally favors, and is purely historical, and, therefore, necessarily geographic. In this the collections are divided ethnographically and a series of separate museums are formed, each illustrating the art history of a race or country, and quite independent of the similar contemporaneous arts in each period. This is also favored by the esthetic party as the art works of the respective countries can be arranged to harmonize, and the student of the history of the special country is not shocked by the intrusion of the works of another people.

The other, and to my mind the greater system, is the economic or technical, where the great art industries are segregated into collections which in each craft commence with the earliest known works of man and show the growth of the art craft through all the ages. This alone satisfies the designer and the craftsman, and its educational influence over the casual museum visitor is deep and permanent. In all the art crafts we have the same history — man's struggle for mastery against the forces of nature — and in a collection of pottery, commencing with the rude earthenware of prehistoric man down to the exquisite porcelain of China in the 17th, and of Europe in the 18th century, and carried on to the present time, we see a series of triumphs in which man finally rivals, if not exceeds, the works of nature.

The two systems can not well be carried out simultaneously, as the class of museum officer required in each must receive a different training, and even possess a different temperament of mind. The first deals only with the past, and the highly trained student is

generally jealous of any modern attempts to rival its historical treasures. The second, the technical student, has no boundary to his horizon, and he regards his craft examples wholly as models containing inspiration for future victories in the special art which he knows is still growing and capable of indefinite expansion. From the practical point of view such a museum justifies public maintenance, as it not only sets a standard by which all those engaged in the art manufactures are raised in their knowledge and taste, but it also elevates the taste of the general public, who are thus educated to appreciate the higher level and to accept nothing inferior in standard.

Both systems can be equally useful to the educationalist, and even the present arrangement at the Metropolitan Museum, which is a jumble of the two, can be utilized with advantage, so far as it is fairly perfect in the illustration of any one people or craft.

Our sympathies naturally go with things we understand, and here the museum is a connecting link between ourselves and the past, as it opens up to our view the origin of objects of daily life with which we are now surrounded, and in which each has been arrived at through countless improvements, one by one, the effort of man in trying to do better than his predecessor. But to indicate or propose a system of instruction I fear would be a serious task for me to attempt. First of all, I am not interested in any but the requirements of the art educationalist, where the golden principle should be absolute freedom from controlling dogma of all kinds, and to throw open to the student the whole field of art history, illustrated by examples of all periods, good or bad.

The utmost I can do is to indicate how those engaged in education may utilize the museum, without demanding help from the museum officials, whose time is more than fully occupied in the duties of their several sections, their principal work being the preparation of suitable catalogues, after properly classifying and arranging the examples contained in each. These catalogues, in some cases, and should in all, commence with an introduction showing the historical development of the art contained in the section, and this has been accomplished in about 12 sections. Later on, I intend to prepare abbreviated catalogues, which will convey such information as will enable the principal features in each section to be distinguished at once, and these will form a key guide to the more serious literature of the larger handbook catalogues. Then a course of lectures will be organized on the collections, and these should be prepared from different points of view; the esthetic, the

social historic and the technical, which should be also historical, as to know and appreciate the works of the past is our only guide in improving the present and our way to greater perfection in the future.

In the early records of the South Kensington Museum, we find that rules were laid down for guidance of the purchasing officials, and these very wisely contained an order that, whilst no limit should be placed on the number of objects of any class illustrating a good period in art, yet care should be equally taken to secure a sufficiency of examples to illustrate the various periods of decline, in order that the student might study the causes which lead actually backward while the artists and the public were satisfied with the increased perfection of technic in one form or the other, which they mistook for increased improvement in art.

I am old enough to remember the first of the world's great fairs — the London Exposition in 1851, and that of 11 years later, again in London, in 1862, when Europe was congratulating itself upon the remarkable progress made by all countries in all the fine arts — in many cases a revolutionary change. Paris, in 1878, showed France beginning to free her art from traditional forms. This was continued in 1889, and in the last great exposition of 1900 l'Art modérn reached its hight.

This affords me an illustration of the difficulties in museum direction when the museum is under the control of an education department. In 1900, one of the members of the jury, a leading expert in medieval art, offered to place $20,000 at the disposal of the South Kensington Museum, in order to secure typical examples of the new art movement, although from his training and personal feeling he was quite opposed to it. Selections were carefully made, including the best work from Nancy, which seemed to be the French center, but when the work came to London a protest was made by the extremists among the art advisers of the Board of Education, and the collection, although very popular, was carted off to the Museum of Bethnal Green, a distance of about 7 miles, and, although the city of Birmingham insisted upon the loan of this collection for some weeks, other cities were warned off. Possibly in the new buildings, when completed, wiser councils will prevail, and this collection, marking a distinct epoch at the close of the 19th century, will take its place with the examples illustrating the history of art.

In conclusion, I may say a few words upon the title of my paper, "The Province of a Museum of Art in a System of Public Edu-

cation," and this will require very few words, for, in my opinion, a museum of art should play the same part as the great library, but substituting actual objects for books. More is not to be expected of it, but it is absolutely necessary that a good system of classification and catalogues should make every object as accessible as any one book out of several hundred thousand in a public library.

GRAPHIC ART AS A FACTOR IN PUBLIC SCHOOL EDUCATION

HENRY TURNER BAILEY, EDITOR THE SCHOOL ARTS BOOK, FORMERLY STATE SUPERVISOR OF DRAWING FOR MASSACHUSETTS

From a consideration of the museum, stored with the priceless treasures of the race, we turn to a consideration of the public schools, stocked with the more precious problems of the race.

In the consideration of the topic, announced for this hour, it seems to me best to think first of the character of this factor in public school education, and then of the influence of this factor, for so we may arrive at something like a just estimate of graphic art as a factor in public school education.

To show its character I have chosen a few samples of drawings which have been submitted to me at various times and from almost every State in the Union. These drawings represent the work of children in every grade of the public schools, including the first year in the high school.

Graphic art in the public schools at the present time begins with illustrative sketches representing experiences which the pupils have had. The work is originative, not from the model but from memory. Further use is made of these memorized, visualized objects in the illustration of folklore, Mother Goose rhymes, stories etc., and it is carried on not merely with the pencil and crayon but with the scissors.

And not only are the figures of common objects, animals etc., introduced, but very early the children are led to observe nature as she appears in landscape. They represent such subjects as a tree at sunset, trees as affected by rain, views of buildings seen against a sunset sky. Then they illustrate a line of poetry involving natural features, — the water, the winds, the sky. Then comes perhaps a decorative composition in color illustrating some caption or title.

This is supplemented by a closer observation of nature and the representation of plant forms. They study to represent the growth and movement of the plant, the colors as well as the forms of flowers; first very simply rendered by a flat wash, a record of the local color of the flower as a whole, then with varied washes representing the aspect of the flower as seen under normal conditions.

The work then passes on to more difficult problems dealing with the third dimension, hence involving perspective factors.

Early in the grammar grades the pupils begin to more critically observe all these things and through representation by means of the point — usually the pencil — to show the articulations of part to part, the varied contours of the leaves as affected by curling, as affected by insects, accidents in the life of the plant; and to suggest something of the grace of line and quality of texture in the parts.

Along with this goes the representation of artificial or manufactured objects, the pupils in the primary grades beginning with their Christmas toys. Objects of pronounced shape and erratic character are more easily represented by children than the more commonplace objects, hence these are studied in the lower grades. In the upper grades these are supplemented by objects involving perspective, like a box or a book, groups of still life, etc.; and these are represented not merely in outline in pencil, but in light and shade, and in color.

The pupils are required also to observe and record living things in action. To catch these almost instantaneous impressions demands a still closer observation. Thus a steadily increasing demand is made upon the pupils' powers from the first grade to the highest.

In addition to this direct study of objects, and this direct graphic representation of objects, there are courses which take up the second feature of graphic art, as noted in the introduction printed in your program, namely, courses having to do with the receptive faculties. We have courses in appreciation — the study of the work done by those who have gone before. Reproductions of the masterpieces of art are studied and utilized as illustrative material, and under the inspiration of this graphic representation of objects and this study of the reproductions of artists the pupils in the upper grades illustrate their school papers in geography, history and literature and produce really excellent handiwork, such as a pamphlet on the Sistine Madonna, a composition on Robert Burns, a booklet on Japan, or on the Revolutionary War, where reproductions are utilized as illustrative material supplemented by pictures and diagrams where the pupil's power of graphic representation has been drawn upon.

Instead of having the children learn 25 words from a book some teachers make use of pictures and sketches even in the spelling lesson. They ask their pupils to draw some object from memory and to make that drawing the basis of the lesson. Others teach English grammar in a similar way. Their pupils make or collect

illustrations, and from these the different topics are taught, so that grammar becomes a new and illuminated topic no longer dry as dust. Under the inspiration of graphic representation geography, history, and English composition have been transformed.

So much for the character of graphic art in the public schools. I thought it might do no harm to stir up your minds first by means of these illustrations that you might be assured of the fact that graphic art in the public schools is no longer the copying of spheres and cylinders and cubes in outline.

We will proceed now to consider the influence of this work where it is well done. Wherever it is well done, its influence is fourfold.

First, it tends to develop the power to see.

The average man sees imperfectly and images dimly. As Professor James says: "His images have broad fringes." He can not tell, for example, where the ordinary Roman letters are shaded, nor the shape of his own boot, nor the color of his friend's eyes. His observation with regard to all material things is loose and unreliable. As Walter Smith used to say: "Unless he has a trained eye, his testimony in court concerning any material fact is not to be trusted." As Asa Gray used to say to his students when studying sedges: "Unless you draw, you will not see." "A pencil is one of the best of eyes," said Agassiz. Graphic representation helps to focus the eye upon the object, as the thumbscrew focuses the camera, or as an adjusted lens corrects defective vision.

Clearer vision of natural objects enhances one's enjoyment of nature and enriches the content of life. All contours of leaves, the articulations of plant structure, the curves of unfolding petals, the delicate mottlings of insect wings, the grooves of shells (which Tennyson called "miracles of design"), the lines of health and movement in birds, in animals, and in the human figure, the subtle tints and shades, sharp glints and darks, which objects present to the eye under sunlight, the exquisite gradations of tone and hue, not only in objects everybody recognizes as colored, but in the gray and uninteresting features of anything, become sources of keen pleasure to him who sees with trained vision.

For lack of the close observation which a training in representation would supply, the average man has no clear images of his own with which to read or think. Consequently the stimuli which cause a satisfactory reaction in his brain must be intense. His music must be brass band music, his color thrill can come only from a gorgeous sunset or the Berkshires in October. His news must be served up by yellow journals in flaring headlines and dramatic

pictures. He can be reached only by colored posters and advertising signs 10 cubits high. His recreations even must be highly artificial. At the coast the sweep of sand and sea, the blend of the dim horizon, the grace of the breaking wave mean so little to him that he must plant on the crest of the beach his merry-go-round, his roller coaster, and all the other noisy and vulgar attractions a perverted ingenuity can invent. The majesty of Julius Caesar and King Henry as they walk through Shakspere's printed pages, and the calm beauty of the old king who wrote the Shepherd Psalm, are lost on the man whose power of imagination is atrophied. He must have, instead, the noise and the glitter, the reality and the vulgarity of the vaudeville.

The importance of clear-cut, three dimensioned images for the imagination and the reason to use can scarcely be overemphasized. The minister who reads the matchless words of the Bible in droning fashion so reads because he *sees* nothing. Booth, Jefferson, any man with power of imagination could not read that way. The man who fails in business or in the social world fails largely for lack of "grasp," as we say, the power to image and forecast conditions, to see through to the other side of the problem, to hold the totality clearly in his mind and read it through and through. As Dean Shailer once said, "The value of drawing in all departments of science, not only as a language but as a discipline of the mind, can hardly be overestimated. Many students entering Harvard University can think in one dimension, some few in two dimensions, but those who can think in three dimensions are exceedingly rare." Every department of human activity offers unlimited opportunity to men of vision.

But in the second place the study of graphic art as pursued in the schools develops the power of expression.

It is unnecessary to review in detail the value of this power in almost every human occupation. In a conference at Harvard University on the relation of the high school to the college in 1903, President Eliot said: "I have recently examined all the courses offered by the university, and I find but one (the course in theology) in which a knowledge of drawing would not be of immediate value (and even there I think it might help in some cases). The power to draw is greatly needed in nearly all the courses and absolutely indispensable in some of them. A very large proportion of studies now train the memory, a very small proportion train the power to see straight and do straight, which is the basis of industrial skill."

Whether a carpenter remain a carpenter or become a foreman or contractor depends largely upon his power to read a working drawing. Whether a machinist remain a machinist or become a master, depends largely upon his power to sketch his ideas of mechanical construction. Whether a printer remain a printer or become a designer of fine printing depends largely upon his power to lay out a job with his pencil. The advancement of any one in his profession — of the designer, the illustrator, the architect, the house furnisher, the landscape gardener, not less than the painter and the sculptor — depends primarily on this power of graphic representation by means of line and color.

But aside from this fact, there is in the mere power to express oneself graphically a source of legitimate pleasure not to be despised. The craving for self-expression is universal and insistent. The love of self-expression graphically, lies at the basis of amateur photography. The pleasure which thousands of people derive from the camera is immense. Only one other group of people who enjoy nature, get greater pleasure from making pictures, namely, those who can make them with the pencil and brush; who can record what they wish to remember without recording the confusing details which encumber it. Representation is to the artist re-creation, and is accomplished with a passionate pleasure such as only those can appreciate who have had the experience.

In the third place, the practice of graphic art develops the power of appreciation.

We are the children of the race intellectually and spiritually as well as physically. The world is full of good people who in the realm of the arts are bovine. They can not tell one tune from another. They do not know a Turner from a Teniers, or a Botticelli from a Burne-Jones. They pass and repass the far descended venerable ornament exquisitely cut upon the porch of a colonial house, and know nothing of its presence, much less of its eventful history. They sit on Sunday in a church where the sacred symbols, first scratched with trembling hands on martyrs' graves, blaze forth their messages from glowing windows, or whisper them from the font and table and altar; but having eyes they see not, and having ears they hear not. The great world of art is to them a nonentity. A Latin grammar, a Greek text, an algebra, a geometry, a bank book, a mill sheet, a financial report, is the measure of their horizon, and the arc of their sky. A man submerged in business, entombed in a shop, buried in a book is an intellectual and spiritual bankrupt.

The child never attains manhood until he secures the keys to the great treasure-house of literature, music, architecture, sculpture, painting, and the other arts, which record the experience, the aspirations and the ideals of the brightest and best of those who have gone before. The work of those men is another source of pleasure and of satisfaction which the man who would live the larger and more abundant life can not ignore. Every attempt to represent a blade of grass, a leaf, or a flower, every attempt to catch the movement or gesture of any living thing, prepares the mind as nothing else can for the appreciation of the work of Dürer and Landseer, of Rosa Bonheur and William Hamilton Gibson. Every attempt to represent a tree or the sky, a body of water or the sweep of hills will enhance one's appreciation of Claude and Turner, of Corot, Mesdag and Fritz Taulow. Every attempt at illustration and pictorial composition will open the eyes to the almost marvelous skill of the old Italian masters, of Millet, Burne-Jones, and Whistler. Every attempt to put down the color of a flower, or a shell, or a spray of autumn fruit, or a spring landscape, or a moonlight night, will enhance one's enjoyment not only of the work of the Venetians, but of the rug makers of the Orient, of the potters of China and western Europe, of the great jewelers from the days of the Etruscans to the present moment, and of all those who have wrought in fabrics with the loom or the needle. All this appreciation of the work of men will send the happy spirit to nature again with keener eyes. The man of the annointed eye will see her as the artists and poets have always seen her, so beautiful that the shadow of a mountain daisy on a stone will inspire a poem; the glint of light on rind or fur or feather, inspire a picture, and the gloom of the calm night, inspire a symphony.

And lastly the influence of graphic art as a factor in public education is important because by means of it, when our pedagogical machinery is perfected, we shall be enabled to discover every particle of talent possessed by the children under our charge, and to develop it for the good of all.

The heart of man is never satisfied. We shall go on demanding illustrated books and papers, paintings to hang upon our walls, pictures spread before our eyes in the landscape, beautiful garments and jewels, beautiful temples, civic buildings and homes; and the men and women who will produce all these in each generation are among the boys and girls in the public schools of the preceding generation. The character of the art which they will produce will depend very largely upon the amount of training they

receive, and the extent to which they have been made familiar with what genius has done before them. We can not too early discover these precious vital elements and begin the salutary discipline which shall enable them to carry the artistic triumphs of the race to yet higher levels.

It seems to me especially significant that this topic should be considered in this Convocation, for, as we all know, the good work in graphic art which is now being done during the first eight years of school life suddenly comes to an end. Those who go on through the high school, the college and the university to become the leaders in the various professions and realms of art, are deprived of its salutary discipline because no adequate recognition is given to drawing in college entrance examinations. Principals of high schools throughout the country allow drawing to become a non-entity in their schools, thereby depriving not only those students who are to go to higher institutions of the culture which would come from the study, but robbing also the vast majority of other students who are to go from the high school directly to the duties of life.

The colleges need not give us "requirements in drawing;" in fact such requirements might become an added burden; but the college with its breadth of view, with its ideals and with its prestige can be of immeasurable help to the public schools, of every grade, by recognizing the value of that language which has made possible the fine arts of the world, and the quality of that culture which comes from the observation, the creation, and the appreciation of the beautiful.

Discussion

PROFESSOR WILLIAM KENT, COLLEGE OF APPLIED SCIENCE, SYRACUSE UNIVERSITY

I think that what the author says in his paper is rank heresy, in the minds of a great many people in this country who are at the head of our educational institutions. For example I heard not long ago the statement that there are too many fads and frills in the ideas of the educators of this country, and this came from head of a large institution. He said, "Drawing, for instance," and the tone showed his contempt for the subject of drawing. One of the recent reports of the United States Commissioner of Education devotes a great deal of space to Germany; and the statistics of the German schools show that in every grade drawing is considered a very

important matter. In those parts of the book that relate to the United States, I did not find drawing mentioned. In the particular college with which I happen to be connected, four years ago the entrance requirements did not include drawing, except as an elective; and in going over the high school requirements it was found that a boy might go through the high school without having learned anything about drawing; that a man might be even graduated by a liberal arts college and never have had a pencil in his hand, excepting possibly in his work in biology; that drawing was not considered a part of a liberal education; that art is not considered a part of a liberal education; that book knowledge is the thing; that the idea of a man taking a pencil and expressing himself graphically has nothing to do with education; that education belongs to words and books. The great body of educators who have made the curricula are today allowing men to go through the universities knowing nothing whatever about art. Further in some liberal arts colleges the subject of art, the evolution of art, art criticism, are either not found in the curriculum at all or else they are offered as minor electives. The courses in the classics, Chaucer, the influence and development of Anglo-Saxon, the English language, the philosophy of Kant, all these are considered to be liberal education; but anything that relates to art is not. The result is that in the United States today the people are not artistic, and I am afraid that what the previous speaker said was right, that the principals of the high schools are not educating the 95% but only the 5%. We are in the dark ages concerning education as applied to art.

What is going to be the outcome of this paper? We are all very well pleased with it and I am absolutely in accord with the author in everything he said. In the classic words, "Them's my sentiments," but what good is it? It may be printed in a forthcoming report and put on the shelves of the library. Is that all that is going to be done with this paper? I regard this paper as an indictment against the Board of Regents of the State of New York. I regard it as an indictment against the presidents of the universities of the United States, as an indictment against all in authority in charge of educational matters. What are you going to do about it? Of course there is no court to try this indictment in, no district attorney to press it, no jury to pass on it, but are the educational authorities of the United States going to sit down and rest under this challenge? I say the Regents should take this matter up and consider it as an indictment, as a challenge and a charge that they have not been doing their duty in connection with

this matter of art education in the schools. I do not know much about the Regents, do not know what they are doing in this line; but if they are not experts in this subject of art education, if they know nothing about the subject, will they not at least appoint a committee of experts to take up this subject and study it for the next two years and report, with a view of having some legislative action taken. Something ought to be done about this matter. Do not let us put this paper on the shelf.

Vice Chancellor McKelway — I am sure that whether the gentleman from Harvard has propounded a new truth or attractively refurbished an old fallacy, we shall be very glad to hear from anybody on it whether in support or in controversy.

The committee that made up this program had an idea that we should not be hanged on a gallows of our own erection, but even our guests have become, and with alacrity, voluntary executioners of us. It might be suggested than an explanation of the deficiencies of the colleges and universities would require that the medium of that explanation be language, and that language could be placed in the realm of art with either pen or pencil. But that may be heresy, and remarks here have shown to us that heretics are in danger of Syracuse fire.

PRINCIPAL WILLIAM MC ANDREW, WASHINGTON IRVING HIGH SCHOOL, NEW YORK

We seem to be left at this point of the discussion with the idea that there is a great deal of ignorance as to what the State has already done in the matter of art encouragement. To your invitation, Mr Chancellor, no member of the Department in an official position has made answer, probably because the members best fitted to answer this question are not present. But it does seem as though this meeting ought not to adjourn without an attempt being made to enumerate some of the things that the State of New York has officially done in the line suggested by the discussion this morning.

If no one else will answer, Mr Chancellor, may I make the attempt, little as I know about it? It must be at least 10 years ago that we received from the Regents an elaborate and complete monograph suggesting works of art appropriate for the schoolrooms. It must be for fully 10 years or more that schools receiving the Regents funds have been encouraged to expend a portion of

:hose funds in the decoration of the schoolrooms with works of art. [t has been recognized during all of that time that as much time should be devoted to looking at art pictures, studying them and learning to appreciate them as to the manual training side of drawing. The exhibit on the fourth floor which has been referred to will give a more complete idea of the work of the Department in this direction than could be given orally here. It makes available to the schools of this State a great many stereopticon photographs, beautifully colored, depicting Egyptian art, Greek, Roman and Byzantine art, some of the most famous paintings and sculpture of the French collections and a profusion of flower and tree forms and of landscapes of great beauty.

As to the matter of actual instruction in drawing, those who fit boys and girls for the training schools must know that no one can enter these training schools without having had an extended course in drawing. I know of five high schools in New York city alone, part of the New York State educational system: Washington Irving High School, Bryant High School, Flushing High School, Jamaica High School, and Curtis High School, in which the board of education advertises courses devoting 1580 periods to drawing, art study and design.[1]

There are other Regents schools that devote a great deal of attention to art. While we all look forward to the time when this movement shall become stronger, yet we do feel that the State of New York is not behind the other states mentioned in attention to this most important subject. A good many of us have been harboring the idea that New York is in advance: a leader in this direction. It is certain that the publications of the Department relating to art have been called for most extensively and circulated throughout the entire country.

Editor American Art Annual — I have come to this meeting in the hope that some step will be taken by which New York can stand in the forefront in this movement for the appreciation of art; hoping that the Regents would, from the fact that they have devoted this Convocation to the subject of art, take some steps by which a committee would be formed and the matter studied scientifically. The first state art institute in the United States was out in Utah. That was followed by the state of Minnesota, and the state of Washington has it under consideration. Is it not time that something should be done in New York? I merely sug-

[1] New York Board of Education pamphlet *Three Years Technical Course.*

gest that a committee be formed and that there should be some department of art in connection with the University of the State of New York.

Vice Chancellor McKelway — I am sure the suggestion will be most gratefully received by the Board of Regents and by those related to them in the service of enlightenment. We are administrators and those whom the State authorizes us to employ may be called originators. We shall be glad to hear from any other lady or gentleman on this subject.

Mr Bailey — The first speaker in this discussion made the statement that he had the feeling that a great many people in authority did not care for art. In a way he is right. Sixteen years of my life were spent in an attempt to bring about a different attitude toward art among such people in Massachusetts. But to my mind the whole situation is more truly set forth in an experience I once had in a country town where I had been speaking about the importance of music and art in the public schools. An old fellow came up to me and said, "I enjoyed immensely what you said, but I don't believe a word of it. We want our children trained in reading, writing and arithmetic. We want them to know how to cipher so that they won't get cheated. We don't care anything about beauty," and do you know, as I looked at the old hypocrite, I could see that he had dyed his beard before he came to the meeting! He did care for beauty, as he understood beauty. So with all these people, they do care for art, but they do not understand what art really is.

With regard to this indictment, I will confess that it is an indictment. I meant it for that. I would have made it a thousand times as strong if I had had the power to do it. It is monstrous, as President Eliot said in his address at the dedication of the Albright Gallery in Buffalo, it is monstrous that we should go on here in America as we have been going. It seems to me that of all states in the Union this State of New York, which has led in so many good reforms, ought to lead here, for you have an organized body to enable you to do it; and I want to recommend to this Board of Regents and to this convention and to whomever it may concern, that they begin to gather some of the literature on this subject. I have here a report of a meeting that was held at Harvard University in regard to securing some recognition for drawing in the entrance requirements to that university. I have here the report of an address before the Eastern Art Teachers Association a few years ago in which it is shown that in nine leading universities in this country,

having 74 departments or courses requisite to a degree, having 40 courses in which drawing is actually required and having 53 other courses or departments in which drawing would help — drawing is not required in the entrance examinations of one of these universities, and in only a few cases is it even an elective. On the average the nine universities allowed only a possible one twelfth for the value of drawing in the entrance examinations.

This report goes on to say that the colleges might well follow the lead of Leland Stanford University in this respect; and make drawing

1 An elective in all examinations.

2 A requirement for courses in biology, engineering, and fine arts.

They should require candidates to be able to draw common objects free-hand, in outline as they appear to the eye, and to make simple decorative designs. They should require the submission of sets of sheets or plates drawn by the candidate while a student in the preparatory school.

Here is a paper presented by Professor Clarke of Stanford University at Los Angeles this summer on "University Credits in Drawing" in which he sums up what he thinks ought to be the credits allowed. Here is also the report of a committee presented to the Western Drawing Teachers Association at Cleveland last spring in which there is a recommendation as to what the colleges ought to require or to allow.

It would seem to me, I repeat, that this Board of Regents or this Convocation or some institution in this State of New York ought to lead in this matter of recognizing the power that comes from a thorough training in drawing.

The first speaker made one remark that reminded me of a riddle bearing upon this matter of the power of learning through doing aside from a knowledge of reading and writing. The riddle runs, "Do you know the difference between the barons who signed Magna Charta and the members of the present American Senate?" and the reply is, "Not one of those barons could read or write, so each made his mark; all the senators can read and write but not one has made his mark."

Assistant Commissioner Augustus S. Downing — It has just come to my attention that a question has been raised in regard to the position of the Education Department upon the subject of drawing and of art generally. I have had a good many years' experience in connection with the growth of this subject in this State, and having

been its champion when it most needed champions, I can therefore speak authoritatively for the subject of drawing and what the Department is doing, with a perfect belief that New York State has led the other states for a period of 20 years in the matter of art and in the study of drawing. We require for admission to the trainings schools and to the normal schools of this State an extended course in this subject. I would like to tell you just what this is and why it is. We have been criticized for having done as we have, not for our delinquency but for our persistency in demanding this subject. We require that drawing shall be given through four years continuously. For a while one year's drawing or two year's drawing satisfied the Department, but this no longer satisfies and we require that this subject shall be continuous throughout the four years. Students must show during these four years the completion of a course covering at least 228 hours, because we hold with the advocates of art and drawing that educationally it must be a continuous study if students are to get from drawing what it is intended they should get, namely, culture, breadth of knowledge and appreciation of art. We have said for years that drawing is an essential study and that it is necessary that the children shall learn to make straight lines, that they shall be able to sketch, that they shall be able to draw and make designs. We admit at once that a student may not be able to draw much better at the end of the second year than at the end of the first year; that he may not be able to design any better at the end of the second year than at the end of the first year, and if it were simply a question of passing an examination in drawing, that they could complete all the work necessary and pass the examination certainly by the end of the second year. But we feel that passing examinations is not the sole purpose of drawing and of art in the schools. The Department takes the position that this is not even the main purpose of drawing in the schools, but holds that if the appreciation of that which is best in art shall grow, he must continue the study during his third and fourth year; that there shall be a high school course in art that shall deal not only with the technical side of the subject, but that shall deal as well with the cultural side; that students shall study the works of the masters such as Raphael and Michael Angelo and know them and that it shall not be simply knowledge of a name as it is in literature in many cases. We hold that a high school course in drawing shall do more than simply teach a boy to draw and make pictures and sketches — that it shall grow his soul, if I may put it that way, and that when he

oes out of the high school he shall know something of art. You nd homes all over this State and country filled with cheap stuff nat is not fit to put on the walls, simply because the men and omen who put it there never had any training in the schools to nable them to distinguish between the good and the bad in art.

I have stated briefly and hastily what the State is doing and the nly criticism made against it is that we are too exacting in this natter. We are contending all the time on the floor of conven-ions and by letter and with private individuals that our require-nents in art, while they may be in advance of other states and in dvance of what the schools have been doing, are not in advance f what is right.

The gentleman referred to two syllabuses issued by this Depart-nent. In order to encourage this work we have made not only a syllabus in art for the high schools, but we have made a syllabus n drawing for the eight grades of the elementary schools. It came to our knowledge last year that because there was no eighth grade examination in drawing, many of the elementary schools were not giving to their pupils any instruction in drawing but were waiting till those children should go to the high schools to get that instruction. The result was that the teachers of drawing were dis-couraged, and the Department said, "You can announce through-out this State that there will be given not later than next June an eighth grade examination in drawing, because the Department believes that drawing should begin, not in the high school when the habits of the children are formed and their tastes perverted, but that it should begin in the lower grades and go on through the high school." The question arose whether drawing should be required for admission to the high school, and it was decided that this could not be done just yet because all the schools were not ready for it, that we would give an eighth grade examination as an encouragement and when the schools are ready to demand that drawing shall be a requirement for admission to the high school and for the payment of nonresident tuition, we are ready to make the requirement but we can not go too rapidly. I was greatly sur-prised that anybody should question the progress of New York in the matter of art, because the criticism is that we are too progress-ive in this matter. We have no defense to make. It is a matter of joy and pride that we are doing so much and it is a matter of regret that everybody does not know how much we are doing.

Mr Bailey — I intended to say that there is no state in the Union where better work is done in the elementary schools, but what are the colleges doing to foster this work?

Mr Downing — For two years we have been doing our utmost to find somebody who is willing to put the money into it, to make a book for high schools on the subject of drawing and art as there is not such a publication in existence today. For two years we have been laboring to induce these artist friends of ours to produce a book which shall deal with the subject of art from the high school standpoint. We have done everything we could. We say, you must pass a general examination in drawing in the high schools and we will give you three credits toward an academic diploma; then if you want to take advanced drawing we will give you three more credits, and then if you will take either mechanical or architectural drawing we will give you two more credits, making eight in all toward a diploma. We have been begging these people, and Dr Goodwin has been working along the same lines, to put their efforts into a high school book that shall be worthy of the name and that will enable high school teachers to give their students an advanced course — not just technical drawing, the making of lines and pictures, designing etc., but that will give them something of the cultural side of drawing, so that the high school students themselves will know what is really to be found in the study of this important subject. If the gentleman will lend us his labors in the making of such a book the subject will go faster than it is going now. The art teachers have been derelict in this matter.

Professor Kent — In regard to that indictment, I am willing to accept a verdict of "Not guilty, but don't do it again," as I recognize that the Regents have done a good deal in the way of a beginning of art instruction. I have also obtained from the attorneys for the defense the statement that they have not been able to obtain a book for teachers of drawing in the high school, and that therefore drawing has not been taught as it should be. I think that only adds to the indictment. If there is no such book in the market the Regents should employ some one to make a book. I wish to apologize for having injected this indictment into the discussion and put the Board of Regents on the defensive. I wished particularly to have this paper taken up and discussed as to whether it is right or wrong, and to ask that a committee be appointed to study it and report in detail as to how art should be studied in the public schools. I hope the Regents will take up that paper and be able to tell us next year what they have done about it.

Regent T. Guilford Smith — The president of Alfred University alluded to the fact that there is at that institution a state schoo of ceramics. I am inclined to think that at the time it was estab-

lished several years ago it was the only state school in existence, and as I had something to do with the establishment of the school I feel rather bound to defend the Regents from the apparent slight which the gentleman from Syracuse evidently did not intend. You may recall, Mr Chancellor, that when the matter was brought to the attention of the Regents I was gratified to get the unanimous approval of the Board to the attempt to found a state school of ceramics. This attempt had previously been unsuccessfully made in New Jersey and afterwards in Ohio, but it remained for New York State to make it a success. This is because there was appropriated annually, thanks to the late Governor Higgins, $5000 to support this school, and an initial appropriation of $15,000 to start the plant. The school has been in existence now quite a number of years and has met with great success, and I think this is due mainly to the fact that they have succeeded in obtaining as director of this school a grandson of the original Royal Worcester Pottery of England superintendent, Mr Binns, who came to this country at the suggestion, I believe, of the New Jersey pottery at Trenton. The Legislature of New Jersey, however, were not willing to spend the amount necessary, and from New Jersey Mr Binns came to us.

I have visited this school more than once. They have about as much as they can do in the practical application of the graphic art, and in the gallery upstairs can be seen an exhibit of the pottery products of this school and they are good evidence of what has been done. I think last year they had 47 students. This year they opened with 35, and the director reports that he is unable to leave to come to this Convocation as he is too busy. Ohio, New Jersey, Illinois, and other states are now following the lead of New York; and furthermore are employing the students of this school to give instruction in the graphic art and its application in all these states. New York therefore has a recognized leadership in this department of education, through the establishment and maintenance of the New York State School of Clay-Working and Ceramics at Alfred University. That is certainly an illustration of the practical application of the graphic art in this State and it would never have been attempted except it had the unanimous approval of the Board of Regents.

Vice Chancellor McKelway—I do not think it would be dignified for the University of the State for which this Convocation stands to invite a distinguished member of the faculty of another university to come here and express his thought, and hav-

ing received an acceptance and a free expression, to hold a post mortem inquest on his ideas. I believe that only the general subject should be brought to our attention, and that it has been. We all know that every member of the faculty in every university believes that his particular chair is the whole thing, that the others are subsidiary, auxiliary, dispensable and superfluous. We encourage that feeling. It is right for a man to be as intense as the actor whom Edwin Forrest spoke of, who when he played Othello "blackened himself all over so he could feel the part." I am sure we do not wish to criticize that. We wish to welcome you, we wish to learn, we wish to be taught; and when this distinguished gentleman came here to teach us, we found that a misconception of facts had impelled the hand of a New Yorker and a Syracusan to impale us on the blade of an erroneous statement. I suggest now that under the careful pilotage of the no longer discredited members of our staff, our guests might, on their way toward heaven, where art is perpetual, proceed in that direction as far as the fourth floor of this building.

NECROLOGY

REPORT OF COMMITTEE, SUBMITTED BY C. W. BARDEEN, SYRACUSE

The year has been especially marked by sudden and violent deaths. On May 4, the body of Ernest Wilson Huffcut, aged 46, dean of the Cornell Law School since 1903, and private secretary of Governor Hughes, was found in the early morning on the deck of the night boat to New York. He had seemingly everything to live for, yet he had committed suicide by shooting with a revolver.

August 26, on the beach near Los Angeles, Edward H. Jewell, for 15 years professor of pastoral theology in the General Theological Seminary of New York, committed suicide by cutting his throat in the presence of many spectators. He was 77 years old, and had been deeply impressed by Dr Osler's theory.

On January 21, William W. Murray, superintendent of manual training in the Mechanics Institute, Rochester, ended his life by suicide, presumably from overwork.

On July 8, Margaret Sullivan, reelected primary teacher at Chatham Center, committed suicide.

On July 25, R. H. Halsey, principal of the Oshkosh Normal School, and superintendent at Binghamton 1896–99, was killed by an accidental shot from a revolver his son was cleaning.

On Christmas, John E. Myers was found dead in the board of education rooms, Auburn, aged 63. He was principal of the Auburn High School 1867–78, and superintendent at Plattsburg 1878–82. At the time of his death he was president of the Auburn Board of Education.

On March 10, Dr George T. Church was found dead in his office in Brooklyn. He had been superintendent at Middletown and at Saratoga Springs.

On February 25, Principal William Carl Hess of no. 30, Manhattan, fell upon the ice, striking his head upon the pavement, and died before midnight.

On February 16, Jessie Joubin, supervisor of music at White Plains, was killed in the New York Central accident at the Bronx. She was returning from an interview with Walter Damrosch, who had praised her voice and told her she was fitted for opera.

On July 27, Lida M. Bennett, teacher in no. 19, Utica, lost her life through the burning of the steamer Frontenac in Cayuga lake.

On June 8, George Frazer, aged 42, a teacher in no. 44, New

York city, and on June 21, Mary Reilly a teacher in no. 91, were instantly killed by being run over by trolley cars.

On February 11, Principal John L. Mason of Downsville died suddenly in the school building, of hemorrhage of the lungs. He had resigned and had just concluded the last day he was to teach.

May 15, Lynn B. Clark, for five years principal at Cape Vincent, and under contract to teach in New York city, died suddenly, of typhoid fever.

September 3, Gaylord P. Clark, aged 50, dean of the Syracuse Medical College, a man much beloved by all who knew him, died after an illness of 17 hours.

September 27, Principal R. S. Bradbury of Kenona, a man of fine physique and seemingly in good health, died in a few hours after a sudden apoplectic stroke.

Of those whom death has approached with less violence, one who died aged 87 began his life work when he was 70, President George H. Ball, who died February 20. For 40 years he was pastor of a Buffalo church, and he was 70 years old when he undertook the founding of Keuka College, to which he gave the remainder of his life.

Francis Miles Finch, who died July 31, 80 years old, had been dean of the Cornell Law School and for years its most trusted adviser, and used to complain humorously that though he had been justice of the Court of Appeals he was known best as the author of *The Blue and the Gray;* but we may well believe that in his heart he was gratified that it fell to him both to write the songs of the people and to interpret its laws.

Three early teachers of the Albany Normal, who became distinguished elsewhere, have recently died. On August 15, William Franklin Phelps of the first class at Albany, and organizer of the model school, died in Duluth, aged 85.

George W. Plympton, who died September 11, taught in the Albany Normal 1853–56, and entered the Brooklyn Polytechnic in 1863, where he was for 42 years professor of physical sciences, and the best known civil engineer of his time.

Madison Babcock, who died December 28, was an Albany Normal graduate who had held many high educational places in the west, including the superintendency of San Francisco.

Among college men we note these deaths:

August 26, aged 69, Oren Root, till recently professor of mathematics in Hamilton College, following in the footsteps of his father.

He had a wide career as teacher and preacher, and had been a frequent speaker at the meetings of the Convocation. He was a man of powerful and healthy influence.

November 11, aged 74, Henry Martyn Baird, professor emeritus of Greek and since 1902 dean of New York University.

March 9, aged 56, John K. Rees, for 21 years professor of astronomy in Columbia.

In May, aged 46, Roswell S. Hill, formerly for eight years professor of painting in Syracuse University.

Among normal school teachers there have been these deaths:

February 22, aged 61, Warren Mann, teacher of natural science in the Potsdam Normal since 1874, and an influence upon every graduate for true manhood and true womanhood.

September 20, Mrs Sarah Fletcher Bliss, a teacher in the normal schools of Albany, Geneseo, Cortland, Plattsburg, and of the training class at Saratoga Springs, and in Purdue University.

In the high schools we note these deaths:

In April, aged 64, L. F. Robbins, principal of the Rensselaer High School.

November 13, aged 82, Cornelia Mason Johnson, an Albany normal graduate in 1846, and for 28 years preceptress of the Watertown High School.

September 5, aged 83, Alanson Wedge, former principal of several schools in Chautauqua county, and Philo P. Edick, former principal at Chittenango, Syracuse, Oswego, Catskill, and Ticonderoga.

July 4, Charles Bartlett Warring, principal of the Poughkeepsie Military Institute 1863–1901.

March 31, aged 86, William Godfrey Crosby, for several years teacher of languages in Canandaigua.

May 22, George I. Lincoln, for 12 years superintendent of the Thomas Indian school.

Of New York city principals, Andrew J. Whiteside of no. 69, died October 24; Martin H. Ray of no. 51, on December 11; Charles DeForest Hoxie of no. 19, on February 7; James Cusack of no. 17, on May 25; Frank L. Johnson of the Brooklyn Training School, on August 15.

The following principals who have died had been also school commissioners:

March 9, Foster L. Backus, former principal of Clinton Liberal Institute, and in later life an eminent Brooklyn attorney.

September 18, Edward J. Owen, former principal, and son of the Professor Owen whose Greek texts were once so popular.

October 15, David Decatur Darius Dewey, graduate of the Albany Normal, and 10 years a teacher in Albany Academy, and school commissioner in Franklin county.

February 6, Dan S. Griffin, former school commissioner in St Lawrence county.

May 10, aged 44, John H. Murray, school commissioner in Cortland county.

Friday afternoon, October 18

THE PLACE AND PURPOSE OF MUSIC IN PUBLIC SCHOOLS

FRANK DAMROSCH, DIRECTOR OF THE INSTITUTE OF MUSICAL ART, NEW YORK CITY

Seventy-five years ago efforts were first made in Boston to introduce the systematic study of vocal music in the public schools of that city. At the instigation of the Boston Academy of Music of which Lowell Mason was a founder and its leading spirit, the school committee made a thorough investigation and a report based upon its study of the subject in 1837 presents the matter so clearly and understandingly that it may be of interest to introduce it here. The views expressed are those which advocates of musical training in schools still hold today and according to which the work in music is carried on.

After mature deliberation and a careful scrutiny of arguments and evidence, the committee are unanimously of opinion that it is expedient to comply with the request of the petitioners. They are well aware the cause which they support can find no favor from a board like this, except so far as it reaches the convictions through the doors, not of the fancy, but of the understanding.

And in regarding the effect of vocal music, as a branch of popular instruction in our public schools, there are some practical considerations, which in the opinion of your committee are deserving of particular attention.

Good reading, we all know, is an important subject in the present system of instruction in our schools. And on what does it depend? Apart from emphasis, on two things mainly: modulation and articulation. Now modulation comes from the vowel sounds, and articulation from the consonant sounds of the language chiefly. Dynamics, therefore, or that part of vocal music which is concerned with the force and delivery of sounds, has a direct rhetorical connection. In fact, the daily sounding of the consonant and vowel sounds, deliberately, distinctly, and by themselves, as the committee have heard them sounded in the music lessons given according to the Pestalozzian system of instruction, would, in their opinion, be as good an exercise in the elements of harmonious and correct speech as could be imagined. Roger Ascham, the famous schoolmaster and scholar of the Elizabethan age, and surely no mean judge, holds this language: "All voices, great and small, base and shrill, weak and soft, may be helped and brought to a good point by learning to sing." The committee, after attentive observation, confess themselves of this opinion.

There is another consideration not unworthy of remark. "Recreation," says Locke, "is not being idle, as any one may observe, but easing the weary part by change of business." This reflection, in its application to the purposes of instruction, contains deep wisdom. An alternation is needed in our schools, which without being idleness shall yet give rest. Vocal music seems exactly fitted to afford that alternation. A recreation, yet not a dissipation of the mind — a respite, yet not a relaxation — its office would thus be to restore the jaded energies, and send back the scholars with invigorated powers to other more laborious duties.

There is one other consideration to which the committee ask the serious attention of the board. It is this: By the regulations of the school committee it is provided that in all the public schools the day shall open with becoming exercises of devotion. How naturally and how beautifully vocal music would mingle with these exercises; and what unity, harmony, and meaning might thus be given to that which, at present, it is feared, is too often found to be a lifeless or an unfruitful service, need only be suggested to be understood. The committee asked the board to pause, and consider whether the importance has been sufficiently looked to, of letting in a predominant religious sentiment, independently of all forms of faith, to preside over the destinies of our schools.

And now, before proceeding further, let us consider briefly the objections which have been urged against the adoption of vocal music into our system of public education. It is then objected that we aim at that which is impracticable, that singing depends upon a natural ear for music, without which all instruction will be useless. If musical writers and teachers are to be believed, the fact is not so. Undoubtedly in this as in other branches, Nature bestows an aptitude to excel, on different individuals, in very different degrees. Still, what is called a musical ear is mainly the result of cultivation. The ear discriminates sounds as the eye, colors. They may both be educated. Early impressions can create an ear for music. It is with learning to sing, as with acquiring the pronunciation of a foreign language. Instruction, to be available, must be given while the organs have the flexibility of youth. To learn late in life is generally to learn not at all. There may be cases, it is true, of some who from their earliest year defy efforts of instruction, like those who come into the world maimed in other senses; they are, however, rare. They are the unfortunate exceptions to a general rule.

But it is said, the time spent would be quite inadequate to the end proposed; that the labor of a life is needed to form the musician. The answer to this objection is, that it mistakes the end proposed, which is not to form the musician. Let vocal music, in this respect, be treated like the other regular branches of instruction. As many probably would be found to excel in music as in arithmetic, writing, or any of the required studies, and no more. All can not be orators, nor all poets, but shall we not, therefore, teach the elements of grammar, which orators and poets in common

with all others use? It should never be forgotten that the power of understanding and appreciating music may be acquired, where the power of excelling in it is found wanting.

Again it is objected, if one accomplishment is introduced into the schools, why not another? If instruction is given in vocal music why should it not be given in dancing also? The answer simply is, because music is not dancing; because music has an intellectual character which dancing has not, and above all, because music has its moral purposes which dancing has not. Drawing stands upon a very different footing. Drawing, like music, is not an accomplishment merely; it has important uses, and if music be successfully introduced into our public schools, your committee express the hope and conviction that drawing sooner or later will follow.

It will not be necessary to follow the history of musical instruction in schools except to note two of its salient features. Firstly, its wonderfully rapid and wide extension over the whole United States since these early beginnings in Boston, and, secondly, the remarkable way in which methods of instruction, based upon correct psychological and pedagogical principles have developed, so that today these methods compare favorably with the best to be found in Europe.

In order to understand the former of these phenomena it will be better to first consider the latter. Lowell Mason based his instruction on the Pestalozzian system, by which knowledge was conveyed through the medium of the senses and through the psychological influences arising from the congenial exercise of certain faculties, not, primarily, through an effort of memory.

Upon these general principles all further development has taken place. The best thought employed in the teaching of other branches of instruction has been utilized in its application to the teaching of music, so that today any person capable of teaching reading or any other subject can, by applying similar methods, teach music. This fact has made it possible for the regular class teacher to teach music under proper guidance and supervision of an expert music teacher and has thus facilitated the general introduction of the study of vocal music. But there is still another factor which has contributed not a little towards this end: the systematic study of music has created the necessity for suitable textbooks. These have appeared in great variety and show considerable and laudable progress in the plan of instruction, in quality of material and in typography and other externals. The commercial necessity of finding as large a market for these textbooks as possible has led to a remarkable campaign of education on the part of the publishers,

a campaign which has been directed not only towards the training of teachers qualified to teach correctly according to the methods employed in the textbooks, to a limited extent, but to the education of the school authorities of practically every city, town and village, in order to cause them to recognize the value of music as a factor in common school education.

While the keen competition of rival publishing houses has sometimes developed unpleasant and unsatisfactory conditions, yet, on the whole, much credit is due to these publishers for the really good educational work which has been done by them.

It may, then, be taken for granted, since practically all public school systems of this country have introduced music into the curriculum, that its value is appreciated, that the people demand it and that its influence is beneficent. But does it do all it could do? Is its educational value, its influence on character, its power of refinement — in short its whole psychic force developed under the existing conditions?

Let us examine the relative standing which music holds among the other studies of the school curriculum, and we find that it is generally treated in a stepmotherly way. It is looked upon as an outsider, not entitled to more than cursory attention, and often compelled to step into the background in order to make way for the more "important" studies. It is classed as a "special study," yes, sometimes even as a "fad," and, as such, tolerated by some, opposed by others, but cherished at its true worth only by those who, intellectually and spiritually, stand on a sufficiently high plane to appreciate its value. And even these find it difficult to utilize music as they would like, because our school program now embraces so many subjects that no *one* subject can well receive the attention it should properly have.

It is with some hesitancy that I venture to propose my views as to the proper place and purpose of music in public schools before this august body of experienced educators, and I run the risk of being classed with those who think their specialty is "the whole thing;" but I trust there may be found at least one or another suggestion that will lead to fuller consideration of the subject.

In my opinion, the place of music in the elementary school is not as a "special study," but as a *foundation* study. Its purpose not merely to be a means of entertainment and recreation, but to be a strong influence on character.

In support of this opinion it will be necessary first to establish the main purposes of education by the State. Is this to be purely mental and manual, designed solely to fit the citizen for some occupation or trade or should it include the development of the spiritual side, the conscience, love of honesty and truth, of the good and the beautiful?

The former method has been in use for a century or more, and its results have not been altogether satisfying. If our political institutions are corrupt, they are so because the power which creates and maintains them, namely the people, as a mass, have low standards of honesty and integrity. If our cities, towns and villages are for the greater part ugly, unclean and unsightly, it is because the people do not feel the need of beauty in their lives and surroundings. If, in spite of high wages which should procure good, wholesome food, a large number of our people are dyspeptics owing to ignorance in preparing food in a palatable and digestible form, it is because our girls devote the time which might have been spent profitably in learning household duties, to cram their brains with ill understood and undigested crumbs of science.

If our people seek amusement for their leisure hours in cheap and vulgar shows, trashy literature, morbid sensationalism, it is because they have nothing within themselves which can lift them out of the monotony of their daily grind.

But these conditions have a direct influence upon character and, as the State is the people, it is of vital necessity that the character of the future citizen should be developed.

The life and prosperity of the State depends upon the character of its citizens and yet, barring the efforts of inculcating a cheap class of patriotism and the individual good influence of some teachers and principals, there is no systematic development of the moral and spiritual faculties.

It may be urged that the church and the home should supply this training; that religion is sectarian and must therefore be excluded from State institutions; that the schools must primarily fit the citizen to be self-supporting so as not to be a burden on the State. But to these arguments I would reply that the churches and homes, as a fact, do *not* supply this ethical and esthetical training except in isolated cases and in an imperfect, unsystematic manner. On the other hand there is no place in which practical ethics can be so well inculcated as in the school, where every child is thrown into relation with many other chil-

dren of equal age, with those, also, who are older and younger, stronger and weaker, richer and poorer, clever and dull; also with teachers, visitors and others directly or indirectly coming into contact with the pupils.

These supply the opportunities to learn reverence, subordination, good manners, consideration for the feelings of others, unselfishness, kindliness of disposition; a sense of right and wrong and the determination to stand for and protect the right and to combat the wrong; truthfulness, honesty, the sense of duty and all other qualities necessary to form good character.

While it would be inexpedient to teach dogmatic religion in the schools, there can surely be no objection to the teaching of that which forms the basis of all religions worthy of the name —ethics. As to making the citizen self-supporting — make him honest and reliable and he will have no difficulty in earning his bread, the one with his hands in the sweat of his brow, the other with his brains, and for these and only for these should the State supply secondary and collegiate education.

But it is not enough that the citizen should be of good character. He should also be trained to appreciate that which is beautiful in nature, in art and in thought. It is that which creates in him the impulse to strive for higher things. It makes for happiness, for it leads him to seek and find within himself the higher, nobler and more beautiful qualities by which he can lift himself into the realms of the ideal. If I have dwelt somewhat long on the necessity of the development of character, it was because I believe that the undue development of the esthetic faculties and of the imagination without the firm basis of ethical training may fail to produce the desired results. But, in conjunction, these two influences will develop men and women of a type far better and nobler than can be secured by leaving these sides of human development to chance growth.

Teach the citizen to understand and appreciate the best in literature, to recognize what is beautiful in form and color and you will already have given him more opportunities for happiness, innocent enjoyment and a broader, deeper understanding of life than if his horizon were limited by the narrow confines of his humdrum material existence. But when you give him, in addition, the power to express his innermost feelings in music you give him an active force which, more than any other, will lift him beyond himself into higher regions.

Music is as necessary to the soul as food is to the body, as water is to the plant. Those who are unable to appreciate and love music are starved and dwarfed and, while they may be honest and efficient in filling their stations, they rarely know the real fullness of life. In most people the sense of music lies dormant. If it is not awakened in early youth it gradually dwindles and then dies. But if it is called forth it will spring into life more quickly than any other faculty. Let but the mother sing her child to sleep and the seed of musical appreciation will have been laid. Then let music form a large part of the school life, let it begin the day's work with joyous strains, let it relieve the mental effort and the bonds of discipline with its sweet and gentle influence, let it express the charms of nature, let it sound the praise of the hero, let it give out every joy and sorrow, every good feeling natural to the child and you will soon have given nim a language which, by expressing his true inner self, will tend to make him better and happier.

No fear that his mental education would suffer from so much music. The fresh mind, the happy spirit works at its task with interest and good will. Concerted singing makes for subordination and good discipline. A chorus is the ideal type of true democracy. Each member contributes his share to the good of the whole. The individual effort may be weak and, by itself, unsatisfactory; the result of united effort is beautiful, grand and inspiring. The work of the individual may be fragmentary and incomprehensible; the chorus as a whole sways the hearer's heart with mighty strains, majestic rhythm and multichrome harmony. It may not be possible for every individual to produce by himself something that is beautiful, but is it not well worth while to assist in producing it?

If then you grant me the desirability or rather necessity of musical development in the child, the question arises, is it practicable to devote so much time to music.

I appreciate the difficulty which confronts the practical educator in formulating a curriculum. There are so many fine and good things which everybody ought to know. But, if we take the attitude that elementary education should not concern itself with the preparation of children for specific pursuits, but simply to form character, train the use of their senses and faculties and thereby making them *capable* of learning, if later they desire to acquire specific knowledge, it should not be so difficult

to devise a curriculum which would include all that is essential and permit these essentials to be thoroughly acquired.

Let us but train our children so that they can take their places as citizens in the great chorus of our republic, equipped with pure hearts, willing hands, eager minds; with love for the right, the good, the beautiful; with a desire to give their best for the good of all and with high ideals for themselves, the community, the state and the nation, and, just as in school their little voices were welded into pure, sweet harmony touching the deepest feelings of all who heard, so will the great chorus of our democracy burst forth upon the world with its message of peace, and good will, of brotherhood and unity, of beauty and divine love.

Discussion

HOLLIS E. DANN, PROFESSOR OF MUSIC IN CORNELL UNIVERSITY

It is said that every Monday morning there stands up to sing in the public schools of this great country, a chorus of 15,000,000 children. Where music is regularly taught daily, as it is in most of the city school systems in the United States, from one fifteenth to one twelfth of the time of the teachers, and therefore a proportionate amount of the cost of the school system, is directly chargeable to music. For example, if the cost of the schools of Buffalo is $1,620,000, about $130,000 of that is directly chargeable to music. If music has been placed in the schools — as it has — throughout the country, and it costs that amount of time and money, it certainly is a fruitful topic for discussion.

I suppose there is no parallel in the elementary and secondary schools to the conditions and the handicaps under which this subject is trying to make its way. The wonder is that it has survived at all. Consider with me for a moment — and I especially, and in a most informal way, would like to address myself to the superintendents, principals and teachers present — consider some of the conditions under which music exists in the schools.

It is the one subject in the elementary curriculum in which the teachers are not required to have any proficiency whatever; in which they are not required to pass any examination or official test. Therefore they approach the subject, the great majority of them — and I speak now of conditions in the whole

country outside of Greater New York, for which the distinguished speaker who preceded me has done so much — without any special preparation for the work whatever. In all other subjects the grade teacher must make preparation and pass examinations before she commences her work; in music nothing is required of her, not even capacity for the work. In every other subject the superintendent gives valuable assistance, criticisms and suggestions. I want to ask the superintendents present how many of them feel themselves capable to criticize or make suggestions regarding the course of study in music, or the work and fitness of their music supervisors? How many feel any confidence in their own judgment concerning the selection of a music supervisor? How many know of any method by which a superintendent can be sure he is getting a supervisor who stands for anything, academically or professionally?

These conditions are not peculiar to the State of New York. Nineteen out of every 20 superintendents throughout the country know that they don't know anything about music and discreetly leave the whole matter alone! Furthermore, the person who has full charge of the music — the person to whom the whole subject is turned over — is without any official standing in the schools. Any young woman, of sufficient ambition, who can sing prettily or play the piano a little; any young man who is a "good fellow," and sings, or has written a few songs, or who is, perhaps, a good mixer among politicians — any one of these may be a candidate, and a successful candidate — for the position of supervisor of music in the public schools.

Now here is a person, practically left to himself, or herself, to select the course of study (or to go without one, which is the usual method), to take the time, and a very important part of the time of the schools,— to go in and interrupt and undermine the discipline and regular work of the teachers, principals and superintendents, without even a common school certificate. How long shall we continue to spend hundreds of thousands of dollars of the public money and much valuable time of teachers and pupils, under the sole direction of a novice who does not know the a, b, c, of the school? Why is the musical education of the great army of school children placed in charge of persons who know nothing of this art, which is, of all subjects in the public schools, the most delicate, the most sensitive to error and crude treatment, and yet the most prolific in grateful results under the hands of skilful teachers? Dr Damrosch has

shown us why. It is largely because of the old notion that music was a sort of frill or fad — something that everybody wants in the schools, although they do not know just why — something that seems to have a sort of mystic influence upon patriotism and love of home and country,— something that we must have because so many demand it, but which is of really no practical use.

Every week, almost, there comes to me, either by letter or in person, somebody who wants instruction, anywhere from two days to two weeks, in this subject, *because he has already accepted a position and wants to prepare for it!* The following is an example: The Saturday before Labor day my telephone bell rang,—"Is this Mr Dann?" "Yes, you are speaking to Mr Dann." "Well, I am Miss ———; I am stopping at Mrs B's house. I have secured a position as supervisor of music in ——, N. Y., (a town of several thousand inhabitants with a good system of schools.) I want you to give me a lesson in conducting. I need it very much. The first thing I will have to do will be to conduct the music in the high school, and *I don't know the motions the conductor makes.*"

I tried to plead lack of time etc., but she was persistent, and finally I became interested and made an appointment to meet her. I really felt sorry for the girl, and tried to show her about the "motions which the conductor makes." She had been hired because she was a pleasing singer, and it was thought that she would be all right for the "children to begin with." I placed before her a hymn book opened to a tune that I supposed must be familiar to her, and said, "Now, if you will sing, and beat with this baton, perhaps I can show you best in that way."

"But," she said, "I don't know that tune."

"But you can read it."

"No. I can't read notes."

"And you are going to ——— as supervisor of music?"

"Yes, sir, I am to begin next Tuesday."

It is not necessary to continue the story. You can imagine what is going on down in that city now. Some of you superintendents have had similar experiences. What will that woman face down there? They have not had music in the schools before. The lady will do the best she can. One thing she lacks is perspective — the ability to recognize the fitness of things. She has not the slightest notion of the tremendous responsi-

bility she is assuming, nor of the great possibilities of the position which she has so lightly accepted.

Now, what can the right man or woman do in that city in 10 years, in spite of the fact that the teachers are not trained? Given a person who has been trained as a teacher and *is* a teacher, has the artistic sense and the professional training of the musician — such a one can go into that city or into any other city in the United States where there is a good school system and produce a corps of trained teachers in music. Especially is this true of a *small* city, because, as Dr Damrosch has said, every teacher who is not tone deaf and who can teach other subjects well, can learn to teach music successfully. Such a person can go into the schools, from the kindergarten to the high school and can make the study of music a delight to the teacher, to the pupil, and to the home; can make of the high school students a beautiful chorus, which at commencement, and at all times, will be the pride of the whole community; can make the entire community musical — music lovers, music patrons. All this can be done by one man or one woman who is thoroughly capable and trained for the work. Just this has been done, and the many places where it has been accomplished, in this and other states, prove that the one element necessary to make music in the schools generally, a success, a marked success, and a real educational and vital power, is a body of educated supervisors.

Is there any reason — in the name of the schools and the homes — for allowing incompetent, untrained, inexperienced young people to take up one fifteenth to one tenth of the time of the teachers, and pupils in our schools, and a proportionate amount of the public money, only to injure the cause of music and impair the voices of our children? Is there any reason why the music supervisor should not spend as much time and as much money in preparation for his work as does the high school teacher? We are requiring, and rightly so, a college education or its equivalent, of the high school teacher. Should we not require special, academic and professional training of the teacher who is practically an assistant superintendent of schools and who comes into direct contact with every teacher and pupil from the kindergarten to the high school?

I have heard that during the first term of the present Superintendent of Education, he realized the great need of regulation in which music and drawing stood in the schools, and that he

hesitated for some time, considering which subject should receive State supervision; he could not help both, and finally decided that it should be the drawing. It is not necessary for me to call attention to the wonderful change this has caused in the drawing. Does not music, the most nearly universal of all the arts, the most delicate and the most neglected of all the subjects in the curriculum, call for the same help, the same supervision from the State?

There come to me at Cornell every year young people whose voices have been seriously impaired by improper use in the schools; young women who would naturally have been sopranos, but who perhaps had happened to sit on the side of the schoolroom where the altos sat, and had been told to sing the lower part, and, having done so, had developed the low chest tones and never used the upper voice. The next year, when they went into a higher grade and were asked what part they sang, they naturally said "Alto," and were put with the other unfortunate "alto" voices.

It were very much better that there be no music at all in the schools, if it can not be properly supervised.

It is beautiful to see how all the people want their children to sing and they are entitled to protection. They do not want their children's voices ruined; they do not want their speaking voices made harsh, their voices for oral reading impaired, by this awful thing called singing that is heard in the schools of many cities. The brilliant success of school music in an occasional system of schools only proves the possibilities of the subject and accentuates the need of a standard of qualification for the important office of supervisor of music.

May this great State of New York, which has led in so many school reforms, see to it that competent persons and no others be placed in charge of the music in the schools. The blessing of the great army of parents and children will fall upon the state which leads in this sorely needed reform.

When a trained body of supervisors is placed in charge of the music in the public schools, then, and not till then, will music take its rightful place and begin to fulfil its true purpose.

EXPRESSION IN LANGUAGE

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It is recorded in the biography of Robert Louis Stevenson that when he was only four years old, he dreamt that "he heard the noise of pens writing." If he had survived until now it would not be in his sleep only but in his waking hours that his ears would have been filled with the noise of pens writing, with the clatter of the typewriters and with the din of the printing press. To come forward as an author is no longer the privilege of the elect; it is now the right of the many who believe they have heard a call to take up the pen and write. We are afloat on a deluge of newspapers, of magazines and of books — and there is no Ararat in sight for the ark to rest on; there is no bird on the wing to bring us proof that the flood is abating.

It is small wonder that many of those who feel themselves in danger of drowning in the rising tide of printed matter are moved to protest against this incessant multiplication of books and periodicals and that some of them can not refrain from raising the danger signal. They are properly disgusted at the temporary popularity of ill written tales; and they see signs of literary disintegration. They are swift with shrill warnings that the standards of literature are being lowered and that we have entered upon an epoch of decadence. They cry aloud for relief; and now and again one of them ventures to suggest a remedy.

In an address delivered in the summer of 1907 before a western university a New York publisher is reported to have asserted that "up to this time writing has been a harum-scarum, rough and tumble business, with lots of superstition and little training or experience." And then he risked the suggestion that "we must follow the example of the other crafts. Let us have postgraduate schools to teach men and women how to write." This is a plausible proposition; but it is not likely to win general acceptance. It seems to suggest that we should require the degree of doctor of philosophy before admission to the profession of letters, just as we now insist on the degree of doctor of medicine before the practice of the healing art. If this requirement had been in force in the past, it would have deprived the American branch of English literature of Aldrich and Burroughs, of Howells and Mark Twain, of Poe and Cooper,

of Irving and Franklin, as it would have deprived the British branch of our literature of Bunyan and Shakspere.

But even if this publisher's proposed method of relief is impossible, there is a widespread acceptance of his assertion that some remedy must be found before it is too late, since the present condition is intolerable. A high official of the Education Department of the State of New York has expressed his belief that the public is now "being bombarded in magazines, novels and scientific writings, with a vast amount of English, a great percentage of which would not be accepted in college from a sophomore." And he went on to declare that "no argument is needed to demonstrate that there has been a steady decadence of English style." In making this declaration he was voicing the opinions of many others, who stand aghast at the immense mass of trash now proffered to us on every hand.

Is this declaration justified by the facts? Is there any solid foundation for the widespread belief that we are losing our style and that the standards of English are being lowered? That the belief itself is widespread need not prejudice us in an endeavor to answer the question. Every age has revealed a tendency to disparage itself, to look back longingly to the good old days, to count the signs of its own decline and fall. In every age there have been shrewd observers who failed to appreciate what was under their eyes. Sir Philip Sidney, for example, expressed a most contemptuous opinion of the English drama just when the splendid outflowing of the Elizabethan theater was beginning to be visible. The wise and learned Guy Patin, who died in the same year as Molière, and who could have known Molière and Boileau, Corneille and Racine, believed to the end that he had lived through an era of literary decline and sterility, although he had survived to behold all the glories of the golden age of French literature under Louis XIV.

It may be admitted that we have not now in English literature any leaders equal in authority to the Victorian poets or to the New England group. And yet a time when the art of fiction is illumined by the works of Hardy and of Howells, of Rudyard Kipling and of Mark Twain, of Henry James and of George Meredith, can not be lightly dismissed as a period of decadence and sterility. But it is not with the chosen few that fault is found; it is with the multitude who can prove no call to literature. Now, there is no denying that there has been of late years an enormous increase in the num-

ber of worthless books. But the real question is not whether there are today more poor books, but whether there are fewer good books and whether the poor books are now more in proportion to the good books than they were once upon a time. There are more books, of course, good and bad. There are more bad books. Are there fewer good books? This is a question that no one can answer who has not been forced to a painful acquaintance with the poorer books of other periods.

Most of us recall only the masterpieces of the past; and we are prone to ignore or to be ignorant of the fact that the overmultiplication of ill written books is no novelty, now for the first time visible. We remember Shakspere, and we forget the main body of Elizabethan playwrights whose works are so slight in value that they are known only to special students of the period. We remember Thackeray and Hawthorne, and we forget the countless novels of their contemporaries, which have long ago been condemned to the dust bin. There are myriads of books of bygone generations which have sunk beneath the waters of oblivion. The good books survive and the bad go to their inexorable doom; that was what happened in the past and that is what will surely happen in the future. The mistake we are inclined to make is due to our unintentional comparison of the picked books of the past, which we recall, with the average books of the present, most of which we should be only too glad to forget. Of course, this comparison is unfair to our own time; we are making the blunder of thinking the distant telegraph poles are closer together than those which we are passing now.

The proper comparison is between the average of the past and the average of the present. And it will not surprise any one who is acquainted with the more or less forgotten books of 20 and 40 and 60 years ago, to be told that the average writing of today is distinctly better than the average writing of yesterday. So far from the level of style having been lowered, the standard has risen. The ability to write tolerably is far more widely spread now than it ever was in times gone by. It is not too much even to say that the ill written books of our generation are not as defective as the ill written books of the generation that immediately preceded ours. A comparison of the magazines of 1907 with the magazines of 1857 will show that writers of no special reputation today have a style which was the property only of the more distinguished writers of yesterday. A comparison more particularly of our newspapers with those of half a century ago will reveal a marked improvement

in the use of English — perhaps nowhere more marked than in the advertising pages. Nowadays newspaper English is far more often terse, direct, vigorous, than it used to be. Nowadays magazine fiction is far more likely than ever before to display a sincere desire to deal with life honestly, to seize local color, to preserve the flavor of quaint character, to give the very form and pressure of the time. There never were so many tellers of tales as there are now who are striving to be truthful and who have acquired skill in narration and in character drawing. Of course, there are a host of other story writers, spinning careless yarns, forced in situation, false in character, maudlin in sentiment, and shabby in style. But there were in proportion just as many to be discovered in any earlier period of our literature.

The late Ferdinand Brunetière in his study of Balzac defined a good writer as one "who says all he means to say, who says only what he means to say, and who says it exactly as he meant to say it." Very few authors have ever attained to this perfection; but it is the standard to which the best writers of our time are striving more consciously than the writers of earlier eras. And the authors of our era have followed far more successfully than their predecessors of any earlier period that other theory of literary art which declares the true secret of good writing to consist in knowing what to leave in the inkstand. Even our inferior story-tellers are less long-winded, less tedious than the inferior novelists of other days. Beyond all question, there is plentiful bad writing now; but it is certainly not worse than the bad writing under which our fathers suffered.

Perhaps one reason why many literary critics fail to see this improvement is because they have no relish for those qualities of directness and sincerity in which there has been a distinct gain obvious to all who consider the facts with an open mind. These literary critics are looking not so much for good writing as for "fine writing." With them literature is largely a matter of words and phrases. They are seeking a sign, an outward and visible sign of literary merit, something apart from the inner and spiritual grace which gives life to a real piece of literature and which results from the subtle and perfect union of feeling and thought and knowledge. They are swift to praise mere stylists, jugglers with words, contortionists with acrobatic phrases. They are slow to discover that *Huckleberry Finn* is a masterpiece, in spite of its dialect and its low life characters. They are interested in the mere externals of literature rather than in its essentials, in the rhetorical

outer garment rather than in the inner veracity that gives it vitality. They seem to think that literature can live by style alone.

For these misguided folk there is profit in citing Merimée's statement that Stendhal, an author of indisputable power "despised mere style and insisted that a writer had attained perfection when we recalled his ideas without remembering his phrases." No doubt, this is a hard saying; and perhaps it may be called an overstatement. Even in workaday prose there is often an added delight in the beautiful phrasings of a beautiful thought and in the eloquent commemoration of a lofty deed. Lincoln's Gettysburg speech, for example, is more than a bald summary of obvious sentiment; it lingers in our memories because of the noble dignity of its few sentences. But even if Stendhal's remark is an overstatement it is not really a misstatement. The one necessary quality of the best writing is transparency — that electric communication from writer to reader with the least possible resistance. And this quality of transparency, of sharp clearness, is more consciously pursued today than ever before, not only by the best authors but even by the average writers of our time, by contributors to magazines and by journalists.

Yet it is only fair to say also that fine writing is not to be dismissed contemptuously. It has its uses; it is a good gymnastic; it tends to variety and to suppleness of style. Shakspere poked fun at Lyly, the euphuist, but he profited by the flexibility which English owes partly to Lyly's trick of playing with words. Molière held up to scorn the preciosity of the coterie which met at the Hotel de Rambouillet, but none the less is his own use of language more delicate and more precise because of their pretentious endeavors. But although something may be said for the practitioners of fine writing, their standards are fundamentally false. They are self-conscious and affected; they are finicky and pedantic. They do not write as they speak. It is the rigid Vaugelas, the reformer of French style, who declared that "the greatest of all errors in the matter of writing is to think, as many do, that one must not write as one talks."

We need constantly to remind ourselves that language was spoken long before it was written; and that the written word is only the image of the spoken word. Even now that the printing press is unresting, poetry is not possessed through the eye alone; it is ours completely only when we take it in through our ears and have it on our tongues. Oratory and the drama live mainly in the human voice; and on the printed page they are but half alive. The

best vocabulary is not that of the library, but that of the street and of the market place; and the best writing has the straightforward directness of popular speech. Emerson praised Montaigne for "giving to literature that which we listen for in barrooms, words and phrases that no scholar coined, that have neatness and necessity in the vocabulary of work and appetite." Lowell asserted that his masters in language had been boys and blackguards. And in the writing of Montaigne, of Emerson, of Lowell, we find the true ideal attained — "the speech of the people in the mouth of the scholar."

I assert not only my conviction that the average of literary skill is higher than it ever was before, but also my belief that no small part of this improvement is due in large measure to the increased attention now paid to English composition in our high schools and colleges and to the better methods of rhetorical instruction which are now in use. Our teaching is now affirmative and not negative as it used to be. We set students at writing about the things they are interested in; we tell them what to do and we show them how to do it; and no longer do we discourage them by focusing instruction on what they ought not to do. With a fuller understanding of the needs of these beginners and with a keener appreciation of the fundamental principles of literary art, there has resulted a relaxing of the absurd restrictions, which made schoolmaster's English a byword. Green boys are no longer set to discover the alleged blunders in Shakspere's style and they are not now trained in conceit to think that they know more about English than the masters who made it what it is and gave it its richness, its variety and its vigor. They are encouraged to say what little they may have to say in their own fashion as best they can. They are not condemned to wear the strait-jacket which the purists and the pedants have been striving for centuries to impose on our elastic and vivacious speech, and which would make English not only academic but anemic, not only juiceless but nerveless.

We have been rendering it easier for students to learn how to write and we have also been emphasizing that it is not easy to write well. Nothing is easy that is really worth while. Language is a stubborn implement, hard to wield and rebellious to the hand. In one of his notebooks, Hawthorne, himself a master of style, set down his opinion that "language, human language, is but little better than the croak and cackle of fowls and other utterances of brute nature — sometimes not so adequate." But this was only a passing petulance of a great artist in letters. It was not for publi-

cation; it was the secret utterance of an accomplished craftsman, to be laughed at the first time it happened again to meet his eye. Huxley, also a stylist in his own straightforward fashion, was more nearly right when he asked, "What is it that constitutes and makes man what he is? What is it but his power of language — that language giving him the means of recording his experiences — making every generation somewhat wiser than its predecessor, more in accordance with the established order of the universe.

It is language that lifts us above the brute, and if language is to be more than the croak and cackle of fowls, then it is worth our while to master it, to bend it to our use, to understand its possibilities, and to train ourselves to see in it the sole instrument for the transmission of knowledge and thought and feeling — the better instrument the more directly it is able to transmit these precious possessions. The real defect of the mass of printed matter which is bombarding us today is not to be sought in the deficiencies of style but in the defect of substance. This mass of matter seems badly written because it is born in knowledge and thought and feeling. As Voltaire told us long ago, a man always writes badly when he has nothing to say; and that is a disability which can not be removed by any high school training in composition or by any postgraduate course in rhetoric. It is not hard to teach men and women, even boys and girls, to express what they feel, and think, and know; but it is painfully difficult to teach them to feel sensibly, to think clearly and to know accurately. And this should be the aim not only of the teachers of English, but of all who are intrusted with the instruction of youth. The most that the teacher of English can do is to help those to express themselves who have something to express. He can do little for those who have nothing to express — except to make them understand that it is impossible to pour out a full measure from an empty vessel.

It was the shrewd Bagehot who asserted that the real trouble with books was to be ascribed to the two facts that most of those who could write did not know anything and that most of those who knew things could not write. This second group, those who have something to say which they don't know how to express — these the teacher of English can help. But the first group, those who already know how to write but have nothing to say — who is to help them? And how are they to be helped? One thing at least we can tell them — that the art of expression is useless if they have never anything of value to express. We can once more call their attention to the duty of their opening their eyes to the life

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who will study this rare art in other universities, are the very infinitesimal remnants of the multitude who have to use language as a means of expression. Those who are to have the advantage of the vastly improved methods of the teaching of rhetoric in our high schools are also a sadly small minority of the large company of people to whom some facility in the art of expression by this medium is a matter of primary importance.

Now I desire to register my own conviction that the optimism which has been expressed with reference to the masters and the professionals in the use of this art is in large measure justifiable also with reference to the goodly number of those who are properly to be classed as amateurs; that the product of our schools is in large measure more perfectly fitted for the expression of its thought than that of a generation ago was. Yet there are some things that demand our attention as teachers of this vast company of amateurs.

It is manifest to all those who have to do with the young people who are coming into our higher schools, that there is in three directions a lack which is fundamental; a lack in the instinctive use of clear and complete statements; a lack of instinctive recognition of grammatical correctness, and a lack of instinctive choice of the right word. Now you will not say that these things are so difficult that the lack should be taken as a matter of course. You will not say that complaint of that lack in a company of schoolmasters is a matter inappropriate, for in any art there are some fundamentals of technic an early mastery of which is absolutely essential to the successful practice of the art.

You can not make a pianist unless you take him before his teens. You can not make a painter unless at an early age the principles of drawing and perspective have not simply been set before his mind, but have been wrought into the muscles of his fingers and his arm, so there are certain elements of the technic of expression which are as essential for the professional as for the amateur, and which must be got possession of before the question presents itself to a man whether he will choose literature as a profession. I think those elements are, or rather those elements include, the items I have referred to, namely, an instinctive use of clear statements, an instinctive feeling for grammatical correctness, and an instinctive choice of the right word.

In our training in English we used to have certain things insisted on that, so far as my observation goes, are not as greatly emphasized today.

shown us why. It is largely because of the old notion that music was a sort of frill or fad — something that everybody wants in the schools, although they do not know just why — something that seems to have a sort of mystic influence upon patriotism and love of home and country,— something that we must have because so many demand it, but which is of really no practical use.

Every week, almost, there comes to me, either by letter or in person, somebody who wants instruction, anywhere from two days to two weeks, in this subject, *because he has already accepted a position and wants to prepare for it!* The following is an example: The Saturday before Labor day my telephone bell rang,—"Is this Mr Dann?" "Yes, you are speaking to Mr Dann." "Well, I am Miss ———; I am stopping at Mrs B's house. I have secured a position as supervisor of music in ——, N. Y., (a town of several thousand inhabitants with a good system of schools.) I want you to give me a lesson in conducting. I need it very much. The first thing I will have to do will be to conduct the music in the high school, and *I don't know the motions the conductor makes.*"

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"Yes, sir, I am to begin next Tuesday."

It is not necessary to continue the story. You can imagine what is going on down in that city now. Some of you superintendents have had similar experiences. What will that woman face down there? They have not had music in the schools before. The lady will do the best she can. One thing she lacks is perspective — the ability to recognize the fitness of things. She has not the slightest notion of the tremendous responsi-

go to college, the products of our high schools, and who probably represent a very much larger number who do not go through the high schools or who do not desire the college,— among these young people I find a carelessness of expression, a slovenliness of utterance, a contentment with incompleteness and incorrectness, a carelessness concerning grammatical correctness, and an indolence with reference to the choice of a fit word, with which it seems to me we should not rest content. I am not arguing the question whether this condition is more crying than it was a generation ago; I am simply arguing that it is not a condition with which we can easily be content.

Now, in this connection, I desire to express my own conviction that we can mend matters considerably by giving attention in the choice of our teachers to something which I know has had neglect in some quarters within these recent years. I think the departmental organization of our schools has marked an unquestionable advance in the instruction in the various subjects of study. On the other hand, I am convinced that in this matter of the art of expression in language it has led to a distinct loss. Professor Matthews most wisely intimated that the problem of correct and clear expression is, first of all, the problem of correct and clear thought. Now in those disciplines in the schools which lead most naturally to the culture of correct and clear thinking, is it suitable that the teacher should be content with the expression that is not complete and correct? I think that we have urged so insistently the importance of covering ground that we sometimes have led our teachers of mathematics, for instance, to feel that the substitution of short-cut phrases, of abbreviated utterances, of written equations, is sufficient to justify us in the neglect of the requirement for completeness of logical demonstration, that used to be one of the most valuable disciplines we had.

I have forgotten, I would venture to confess, every theorem in geometry that I ever learned. I do not think I shall ever forget a certain relentless insistence on the adequacy of the conclusion from the expressed argument, a certain relentless calling back to indicate the omitted step, a requirement that I should not arrive in my haste at a conclusion by a leap over something that should have had my foot firmly planted upon it. And in the study of geometry, algebra, and other subjects, the discipline of which is chiefly logical, the call in which is for correctness and consecutiveness of thought, I believe that as superintendents and principals we would wisely advise our teachers to take what time is

shown us why. It is largely because of the old notion that music was a sort of frill or fad — something that everybody wants in the schools, although they do not know just why — something that seems to have a sort of mystic influence upon patriotism and love of home and country,— something that we must have because so many demand it, but which is of really no practical use.

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we should use all of those hours to impress upon them the imperative value of accuracy, clearness, and correctness of speech, so that in some measure we may offset this pressure of unfortunate or ill-ordered utterance under which they lie for most of the hours of their waking life.

Mine is no cry that the present is worse than the days that went before it, but simply a plea for a somewhat rigid scrutiny of the conscientiousness in English speech of the teachers whom we appoint for our classes in science, in mathematics, and in history. Such a scrutiny will be embarrassing to some of us. I think the most successful, the most charming, and the most fascinating teacher of science I ever saw in a boys school was the worst sinner in the use of English speech that I ever listened to, and the very fact that he was so powerful a teacher of science made his influence all the more corrupting in the use of English speech. In view of the fact that this is the only art that every man and woman practises 14 to 16 hours of every day, is it unreasonable that we should ask that any man or woman who aspires to teach in any subject in our schools should first of all give evidence of mastery of the fundamentals of the technic of clear and correct and forceful English expression? If we can secure this in the boys and girls who come up through our grammar schools, if we can hammer upon this necessity relentlessly during the four years they are in the high schools, if we can make all classes in college avenues for discipline in English utterance, I think that the departments of literature in our universities will find no lack as a consequence in the specialists who come to them to prepare for mastery in the art of literature. I am confident that the great mass of men and women who go out from us with the expectation that they are fitted for a happy and useful life will rise up and call us blessed. And it may be, as it has been often of old, that out of this mass there will some day awaken in the minds of the young men and women who least expect it the consciousness of the possession of something to say and the desire to say it, and then that contribution which we have given in the early drill in the mastery of the elements of expression in this art will be the occasion for gratitude on the part of these new discoverers of their literary mission.

INDUSTRIAL ART: HOW IT IS ADVANCED BY ART IN EDUCATION

GEORGE F. KUNZ, NEW YORK CITY

The development of the industrial artist proceeds by a process of selection which results in rendering certain aspects of an environment more attractive for him than others. Just as in three-color printing, by means of a screen we eliminate certain colors, printing only the others, so, according to the manner in which the external world has been interpreted for him, the artist will see and reproduce nothing but the beautiful and the harmonious or nothing but the horrible, grotesque and distorted. This accounts for the great diversity of the manifestations of art among different peoples and in different periods.

The first school for art is nature. How few designers have had time to be in the open air and to become natural in their tastes. Why are so many plant and animal forms so unnatural? Simply because the original drawings are made from dried botanical specimens or from stuffed animals, by artists whose methods and training were altogether artificial; these in turn are colored and lithographed by photographers who are not naturalists. The designer then studies these unnatural objects and frequently distorts them still further. It is very important that the artist should spend two or three days each week in the country, not only a few weeks during vacation period; for whenever that may be, he can grasp only a few pages in the chapter of the year. He should be in a natural environment from the time the snow leaves the ground and the skunk-cabbage is first seen, until the last berries or seeds are visible on the nude branches. He should learn to understand the unfolding of the fern, the shooting out of the buds, the development of the leaf, the growth of the flower, the inception of the fruit and its successive stages until the ripening; and lastly, he should observe the tree without a leaf, this being even a more interesting study than when it is fully clothed. The same with the seashore; how many paintings have you seen of the ocean or of the seashore, even by well known artists, in which all the shells and animal life depicted were those that are purchasable at a shell shop on Fourth Avenue, in a side street of the Strand, or in some of the naturalists shops of Paris? These shells had been

denuded of their natural epidermis, and the colors were brought out as unnaturally as would be those of the human body if the skin were removed from it.

The success of Japanese art, as well as that of Chinese art, is generally due to the fact that these people are students of nature. They are lovers of natural objects; they spend days in looking at the cherry blossoms, the wistaria and the chrysanthemum. The work of the older artists and that of some of the better ones of today carry this out. I know one French artisan jeweler and one American who spend from two to four days a week in just such contemplation of nature as I have described.

A rich client of a jeweler once ordered a dozen enameled daisies for bridesmaids' gifts. He was a critical observer and when the completed work was shown to him, he seemed much displeased; no two were alike; there was either a slightly bent leaf or some difference in the smoothness and evenness of the enamel. The client was about to refuse them as unacceptable when the dealer sent for a bunch of field daisies, and asked him to select any two that were alike, saying that if there were two exactly similar ones, the enameled daisies would be made alike also. The real reason for the dissatisfaction was that the gold daisies were too similar; as painfully alike as are some twins. Each of the natural flowers was a distinct individual flower differing as much as men or women would.

There are four things absolutely necessary in the training of an industrial artist; he must give undivided attention, with his eye, his hand, his mind and his ears, when instruction is given him; for, as the saying goes, "when you are young and take infinite pains, when you are old you will have skill and can count your gains."

In the East, in India and Ceylon, every child is taught this absolute attention, which may be a precept of the Mohammedan religion. If a child is at work sweeping or polishing and a band passes, and the child looks aside, he is at once directed to his work; if some one jostles him, he must pay no attention; if there is a conversation going on, he is not allowed to listen to it. The eye, ear and mind *must* be on the work itself. As a Singalese once stated, the brass that the child polishes, the inkstand, the lamp or other object upon which he works, is worth two or three times as much as it would be worth if the child had looked or listened or had not kept his attention on the work. It is said that the children are trained to this absolute obedience so that when their religion is taught to them they shall be just as attentive; and it is probably

for this reason that these people are not only faithful to their religion, but by their thoughtful concentration produce an added value for their work.

Much of the delicate and beautiful East Indian jewelry has maintained its identity in type and character from very ancient times up to the present day; many forms resemble those peculiar to Greece, and these may have been introduced at the time of the campaign of Alexander,[1] only undergoing slight modifications. The contrast with our methods is very striking. In India, the workman is a descendant from two thousand years of jewelers and he is able to make an entire jewel. How different it is with us today! A man may work in a jewelry establishment all his life and never make or know how to make a jewel. He is occupied either at the draw press or the casting furnace; or he is a molder, a chaser, a stonecutter or a gold colorer; but he can not complete a single jewel — any more than the silversmith who melts or rolls the silver, or strikes out the spoon, or shapes the bowl, or finishes out the die-strike and polishes it, can make a spoon. The result is a cheapening of the product not only in price but in quality; because as the workman often need not serve an apprenticeship as he did of old, he can not command the salary of an experienced jeweler. Yet the clever chaser or engraver or diamond setter receives today perhaps twice to four times the salary paid 50 years ago, for ingenuity is always rewarded and a novelty is always appreciated, as may be seen in the wonderful flat watches now made, which are so thin that eight piled one upon another measure less than 1 inch, each one being hardly an eighth of an inch thick, and selling for nearly $300.

Japanese art as it was, and as practised by many of its artists, was one of the most natural and truest of arts, but within the past 20 years the Japanese merchant has also taken up the production of commercial art. The demand has frequently come from communities so crude in their taste, or the buyers have so little knowledge of what is really beautiful, thinking that everything Japanese is desirable, that instead of products of Japanese art, a great quantity of the objects sent here may be termed tea store accessories. The bulk of the Japanese material shown at the Jamestown Exposition was of this character. Flamboyant would be a moderate term to use as a description of an immense, floridly enameled silver

[1] Indian campaign of Alexander, 327–325 B.C. (Alexander was born 356 B. C., and died 323 B.C.)

vase that was held at $10,000; there were cases of similar objects. This vase will probably sell as did the largest enameled vase ever made in Japan, sold at the Chicago World's Fair. There were several buildings filled with minor objects, many of them exhibiting wonderful ingenuity and occasionally good taste, and offered at prices that seemed absolutely ridiculous for skilled labor; but so many were of the more florid character that one of the jury, in speaking to an exhibitor, stated that if Japan persisted in sending such things to the United States, it would surely bring on the much discussed, but we hope never to be realized war. The jurors found it impossible to give any award from an artistic standpoint, but as these objects had been brought so great a distance, they were called manufactures, and as such were awarded a prize, just as one might be given for a water cooler, or a pair of common shoes.

The effect of art and patience has probably never been better shown than in the wonderful objects of jade and other hard stones that find so much favor in China and Japan; and thanks to the generosity of our late citizen, Mr Heber R. Bishop,[1] a collection of these is now the property of the Metropolitan Museum of Art. This wonderful collection well shows us how artistic training and infinite pains have shaped beautiful, delicate objects out of the toughest material that the lapidary encounters, jade and jadeite. In the Morgan collection in the opposite hall we can study the work of the great potters of China who have produced such wonderful objects of faultless and graceful form. It is true, they must have had inherent taste, but they were also educated to know the clay, the wheel, the colors and the glazes, and what color the glazes would be after they had once gone through the fire.

While a sympathetic appreciation of the beauties of nature is one of the principal requisites for artistic development, we must not forget the great value of a careful study of the best models.

In the 18th century there had been two potters of the same name, father and son; a grandson then served an apprenticeship, and in what is now the famous town of Etruria, he proceeded to carry on the manufacture of pottery which is still pursued by his grandsons. He became a student of ancient art and traveled extensively. He then applied the knowledge he had acquired to simple clays, engaged the services of the great Flaxman,[2] modeler and sculptor,

[1] Heber R. Bishop, born in Medford 1840, died in New York 1902. The Heber R. Bishop Catalogue, description of, by George F. Kunz, Met. Mus. Art, April 1906.

[2] John Flaxman, born at York, 1755; died 1826.

and made a study of basalts or black Egyptian ware and of the fine terracottas and cameos. It was this application of art to pottery that has given us Josiah Wedgwood,[1] the greatest English potter and one who has made England known the world over. A proof of the influence exercised over him by his master, Flaxman, is the fact that he made 24 copies of the famous Portland vase which were sold for $200 each; such reproductions readily command $4000 each today. In Wedgwood's case it was not only art but education and application that made him the great master. It was his intense devotion to travel and study in addition to his artistic sense, that has made his name a household word. The study of classic models and of the best work of the potters have made the name of Wedgwood one that is and will be reverenced not only by England but by the entire civilized world.

It was not, however, always within the power of the individual industrial artist to procure for himself the proper environment, and many men gifted by nature with great artistic ability have been unable to develop their talents because of a lack of encouragement. We may note here an interesting example of what can be accomplished by a little intelligent direction.

Catherine II[2] of Russia, realizing that the Ural mountains were an endless treasure-house of rare decorative stones such as jaspers of many colors, malachite, rock crystal, smoky quartz, rhodinite, and granites of peculiar value, not to mention topaz, aquamarine, emeralds, tourmaline and other stones, conceived the idea of sending two Italian lapidaries to the Ural mountains for the purpose of teaching the natives the cutting of stones and the making of artistic objects. This finally resulted in the establishment of imperial cutting works at Ekaterinburg, where, by means of a few instructors and aided by the water power which is unlimited in these mountains and by the presence of the native stones, there were and are created those great vases, tables, mantles, and other rich objects which Russia has for many years used as imperial gifts of favor to such eminent men as Alexander von Humboldt[3] and Sir Roderick Murchison,[4] not forgetting our own great Thomas A. Edison.[5] These objects may be seen in every royal household in

[1] Josiah Wedgwood, born in Staffordshire, 1730; died 1785.

[2] Catherine II of Russia, born in Stettin, 1729; died 1796.

[3] Alexander von Humboldt, born in Berlin, 1769; died 1859.

[4] Sir Roderick Impey Murchison, born at Tarradale, Ross, Scotland, 1792; died 1871.

[5] Thomas A. Edison, born at Milan, Ohio, 1847.

Europe; they have been gifts of the czars for over a century, and are noted for their beauty of line and the quaintness and richness of the substances from which they are made. There are now three imperial cutting establishments; one at Ekaterinburg, another at Peterhoff near St Petersburg, and the third at Kolyvan in Siberia. These works give employment to over 500 stone artists who frequently leave the government employ to become independent masters. Thus, owing to the fact that the farsighted Catherine sent two Italian lapidaries to the Ural mountains, an industry has been created there which gives employment, in addition to those engaged in the imperial works, to a thousand and more people, and an occupation of searching for these gem stones to many hundred more; the latter and part of the former work being frequently an accessory to the tilling of the soil and other occupations when there is leisure in winter or spring and extra money is of great value. Such industries could be created in the mountains of North Carolina and California, where almost similar conditions exist. In Russia, single objects are produced, such as the immense vases of jasper, which require the work of from two to five men for four or five years, and a permanent wealth is created that probably would never have existed had it not been for this farsightedness of the Great Czarina.

In a study of the history of the jewelry industry of the German jeweling city of Hanau, I was somewhat surprised to learn that the jeweler's art was brought there by the Walloons and Huguenots 300 years ago, and that in the city there are two churches, a Catholic and a Protestant, under the same roof, the entrances being at opposite corners. As many as 300 of those who left France and Belgium were united by family ties and for three centuries they have worshipped under one roof; for three centuries the jeweler's art of France has been carried on by the descendants of her own people who were driven out in the evil hour of religious persecution.

A quarter of a century ago, the Austrian government realized the importance of art education to the artisan, and as a result of this, in such small towns as Gablonz, Turnau and Reichenbach, for 20 years there have existed schools where a boy is taught to draw, to design, to model, to hammer out, to engrave, to chase and to enamel a bit of jewelry, as well as to make a drawing of the gem and cut the gem for the jewel; this he is taught to set in the piece of jewelry he has created. He can originate and perfect an entire piece. The result is, that, differing from the custom in most jewelry

shops, he is not only taught a single part, but is taught to make every part of a bit of jewelry, so that with this artistic training, the boy, instead of becoming simply a jeweler, is very soon fitted to be foreman or manager in an establishment, and frequently to become a partner of the firm; all this through the fact that his country has given him two or three years' artistic training. This same method has been carried out in the glass districts where the boys are taught every phase of melting, designing, modeling and engraving glass of all colors. Thus, by the expenditure of $10,000 to $20,000 a year in these small schools, in a gem, a jewelry, a glass or other region, the government has notably increased the output of the corresponding industries.

In 1893, I asked Dr Geheimrath Lessing,[1] director of the Kunstgewerbe Museum of Berlin, why it was there were so few fine industrial art objects produced in Germany; for it already had good schools, and considerable encouragement was given to the pupils. He was not then aware that Paris, London and New York offered so much larger recompense to these people that they generally left their homes; so that although their creations were known in other countries, they were rarely credited to Germany. But in the past dozen years Germany has encouraged work of this kind, and the work of the jewelers, wood, bronze and iron workers in the German section of the exposition held at St Louis, far outdistanced that shown by that country at any other world's fair.

As an instance of the practical influence of art schools and museums on art development, I will refer very briefly to another foreign example. England, for the past 30 years, has liberally encouraged and aided the South Kensington and other museums and employed the most eminent men of the time as directors and professors therein, under the leadership of Sir Francis Philip Cunliffe Owen[2] and then of our own Sir Caspar Purdon Clarke.[3] The result is noteworthy. At the Paris Exposition of 1867, English potters and pottery were but little esteemed; in 1878 they ranked second, and in 1889 and 1900 they equaled, if not excelled, the French.

France has always realized the great importance of its art industries and in Paris we find homes in which a small master hires an

[1] Dr Geheimrath Julius Lessing, born in Stettin, 1843.

[2] Sir Francis Philip Cunliffe Owen, born May 23, 1820; died Nov. 22, 1894.

[3] Sir Caspar Purdon Clarke, born in Richmond, County Dublin, Ireland, 1846.

apartment, one room of which is a salesroom, and his wife is the one who sees the clients. The husband works in his room, either alone or employing a few men; in this way many thousands of objects of gold, silver, glass, wood, leather, bronze, and other things are made, not in great quantities, but a few at a time; the family generally spending their Sundays, not in riotous living as we are led to suppose, but in going to the country and camping out; so that from the break of day until sunset they are quietly resting in that great school of art, nature. Had it not been for these industries, France never would have been able to pay Germany the five milliards of war indemnity. She did this apparently without effort; the fact that she had suffered made her but the stronger.

This education of the higher artistic sense was never better exemplified than by the magnificent and wonderful modern objects shown at the Paris Exposition of 1900. In some of these objects the artist and artisan had combined their efforts; for instance, a table of rare wood, ornamented with carved and beautifully chiseled brass figures, making the table worth $45,000; a bookcase worth $30,000, the natural and intrinsic value of the materials probably not representing $50; a fenderlike fire screen, representing a row of poppies of wrought ironwork, designed by the artist and faithfully carried out by the artisan, representing $3000, while the material was hardly worth $10.

In Paris, some 50 years ago, a bronze founder became an art collector. He was a master of French art and bringing this knowledge into his foundry, he studied how to utilize it, and then acquired a great and choice collection; he owned magnificent enameled Arab temple lamps which brought more than $20,000 each at the sale of his effects. Had not the great Barbedienne[1] devoted so much of his valuable time to artistic studies, his name as bronze founder and his work would perhaps not be known the world over today.

The artisan of France, who frequently receives just as much remuneration as the artisan of the United States, will not hesitate to wear his blouse even on Sunday. He is proud of the fact that he is an "ouvrier" and is usually more self-respecting than some of our American mechanics, who will buy a suit of clothes, and when it becomes too shabby or torn to be worn on a holiday — it is sometimes never mended — they wear it to go to work, and when it is too poor to be worn in that way, they wear it in the workshop.

[1] Barbedienne, Ferdinand, born at Saint Martin de Fresnay (Calvados) 1810; died 1892.

In the Paris Exposition of 1900, in a case 2 feet square, was a wonderful exhibition of ciselé art objects chiseled out of the solid mass of steel, although there was nothing that equaled the contemporaneous 12 inch statue of Louis XIV, shown in the Petit Salon and valued at $50,000. These objects were dagger handles, scissors and knives, and were the work of a Styrian whom nature had somewhat handicapped. This man produced articles of such beauty and requiring such patience, that for a single dagger handle he had refused $2000 from the present monarch of Austria. Without his art training, partly self-taught, he probably never would have been more than a common mechanic in a machine shop. The French secret of many of the beautiful things made in quantities is a good drawing, a carefully cut die or mold, and the cost to reproduce a beautiful object is then about the same as that of one of inferior design, while its salability is enhanced many times.

It may be said that France has always known this secret of taking something worth little, such as glass, thread, copper and tin, and creating beads, passementerie, lace, wonderful embroideries and other things, for feminine adornment; as well as magnificent bronzes, and modeled, cast or chiselled tin. From feathers and a little silk are made the most beautiful hats; with paper they make the most beautiful books. In other words, having followed an artistic model, it becomes a simple matter, with properly trained artisans, to create objects of value out of those of little cost. The result of this application of artistic education by the dressmaker or the milliner can be seen in the work of such men as Worth or Virot and others, whose dresses and hats are first designed by great artists, and are then made by trained artisans.

When I was 20 years old there lived and worked at 16th street and Union square a Frenchman, Jules Lebrethon,[1] one of the most versatile geniuses I ever knew. He was an artist, an actor, a playwright, a poet, a modeler, and a jeweler; he knew in all, nine professions. At that time he was a successful gem engraver, cameo portraits being in vogue.[2] Lebrethon would have been a great

[1] Jules Lebrethon, died 1884.

[2] During a period from about 1860 to 1885, cameos were much worn in the United States, and quite a score of gem engravers existed at that time, many of whom executed most admirable portraits, which were then frequently called for. Among the most prominent of these were Louis Avet, Jules Lebrethon and L. Bonet. The latter is the only one who has survived, and he is at this time executing most beautiful specimens of the gem engravers art. Saint Gaudens was a pupil of Avet and Lebrethon.

man had he not been periodically convivial; frequently it required a week or longer to recover from a night's smash up. Leon Barre, one of my associates, who had been for many years art buyer for the house of Tiffany, knew Lebrethon, and also a Mr Saint Gaudens who was in the shoe business on the opposite side of the square. In discussing the future of young Augustus Saint Gaudens,[1] who had learned cameo engraving under Lebrethon's teaching, the father was strongly advised by his friend to send him to Paris and to give him a good art training. Had the father not realized a future for his son, had he not taken the advice of his friend and sent him abroad, and had not Augustus had the inspiration of Jules Lebrethon, it is a question whether we would have today the great statues of Lincoln in Chicago Park, "The Puritan" at Springfield, Farragut in Madison Square, the Shaw monument in Boston Common, or the Sherman monument in Central Park, not to speak of that great majestic "Grief" or "Death," as it is called, in Rock Creek Cemetery.

It was my pleasure to have known this great artist for more than 20 years. I both admired and loved him; but for a period his work came very slowly. Many knew that he had great genius, but they began to fear that he was possibly like the young man who wrote a wonderful article. It was so remarkable that he was advised to write a great book. He selected one of the rooms of his home and for years spent hours in it daily. He finally died an old man, and at his death his friends were not so anxious to know the contents of his will as they were to see the great book in this many years occupied room. All they found there were a few sheets of paper that had scarcely anything on them; he had undertaken too great a task. With Saint Gaudens, however, there was a pause of 13 years, and then he gave us the Shaw monument, the Peter Cooper and the Sherman monuments. Inquiring among his associates, I learned that he had broken up some of the models for these works from 10 to 15 times. The wonder is, how he could have accomplished what he did for the small recompense given to him, for he was never content with his work until he had fully done his best; time and the want of money did not count with him in doing the work that has brought him so much renown. And what is more, he had the courage to refuse thousands of dollars. In 1892, at the request of Mrs Potter Palmer, who took much interest in the World's Fair medal, I called on Saint Gaudens three times and urged him to design and model the award medals

[1] Augustus Saint Gaudens, born in Dublin, 1848; died 1907.

for the World's Columbian Exposition. He was three times offered the sum of $5000; he had need of the money, but each time he refused, because, he said, " there is no one in America who can make so important a medal, and surely I would not undertake the task." Later on, however, at the personal urging of Mrs Palmer, he consented. Saint Gaudens's work was acknowledged the greatest of any foreign exhibitor at the Paris Exposition of 1900, and it ranked with the first work in France. Had he produced all that was ordered of him, using assistants as some other artists have done, he might be living today, enjoying the unique title of a millionaire sculptor; but this was not the ambition of the immortal Saint Gaudens.

The first mention of Augustus Saint Gaudens, sculptor, in New York City, appeared in 1881, in which year he resided at 58 West 57th street. In 1882 his studio was located at 148 West 36th street, and his residence at 22 Washington place. These addresses appeared until 1891, with the exception of the years 1887, 1889 and 1890, when he apparently was not in the city. This also seems to be the case in 1892, and from 1893 to 1897 we have his studio address the same and his house address in the years 1893 to 1896, 51 West 45th street and in 1897, Vermont.

The first mention of his father, Bernard Saint Gaudens, was in 1852. He was a shoemaker by trade and resided at 197 Forsyth street. In 1853 he was not in the city, and from 1854 to 1859 his residence is given as 41 Lispenard street. In 1860 he located his business at 268 Fourth avenue and resided at 150 East 21st street. In 1861 his home address changed to 304 Third avenue, and this address appeared up to 1866, his business still being at 268 Fourth avenue. In 1867 and 1868 we have the same business address but his house address is not given. In 1869 we find his business located at 270 Fourth avenue, and his home at 310 Third avenue. From 1870 to 1883 his business address was 314 Fourth avenue, no house address given, and in 1884 his business was at 332 Fourth avenue. In 1885 and 1886 no business address is given but his house address was 610 North Third avenue in 1885 and 454 Third avenue in 1886.

Louis Saint Gaudens, brother of Augustus, was also a sculptor. In 1881 he resided at 58 West 57th street. We find no other record of him in the city until 1884, when from this year to 1886 his studio is given as 148 West 36th street and his residence at 80 Washington square, East. In 1887 we again have no mention of him and in 1888, 148 West 36th street again appears as his studio address, his

residence changing to 270 West 37th street. Skipping the years 1889 and 1890, in 1891 we find his studio still in 36th street, his residence not given. In 1893 to 1895 his studio is still at the old place, and his residence in 1895 in New Jersey.

Louis Avet, Augustus Saint Gaudens's first master, was a cameo worker by profession, and from the year 1863 to 1868 his business was located at 599 Broadway. In 1865 he resided in New Jersey, in 1866 at 79 West 19th street, and in 1876 at 186 Sixth avenue.

We trace Saint Gaudens's second master, Jules Lebrethon, from the year 1860. In this year and also in 1861 and 1862, his profession was that of an artist, his studio being located at 483 Broadway. In 1863 we find him a cameo engraver at the same place. In 1864 his business address was still the same, and his residence in New Jersey. In 1865 his residence changed to 199 West 24th street, and in 1866 his business address was 609 Broadway and his residence still in 24th street. In 1867 his business was at 643 Broadway, and these addresses remain the same up to and including the year 1871, and from this date to 1880 his home address is given as Staten Island. In 1878 he changed his business address to 31 Union square, where he remained until the year 1880, the year of his decease.

In 1869 we find Louis Bonet an engraver at 599 Broadway, where he worked with Louis Avet. In 1870 he is still at this address, and resided at 210 Greene street. In 1871 he changed his residence to 260 Fifth avenue, and we find no further record of him in the city until 1875, when his business address is again 599 Broadway. He remained here up to and including 1878, in which year he resided at 174 Mercer street. In 1879 his business address was 889 Broadway, where he remained until 1882, and in 1883 he moved to 927 Broadway. With the exception of four years, 1887, 1889, 1890 and 1892, we find him located at this address until 1896, inclusive. In 1897 Louis Bonet moved to 41 Union square, West, and he is still located at this address. From 1900 to 1905 he lived at 542 West 22d street, and in the past two years, 1906 and 1907, he has resided at 6 West 107th street.

Of the two greatest medallists of our time, Roty[1] and Scharff,[2] the former a Frenchman and the latter an Austrian, Roty is a pure idealist; he can see nothing that is not beautiful, no matter how dingy or humble a figure he attempts to depict; he sees and draws only those lines that are beautiful and pleasing, notably in his medal

[1] Louis Oscar Roty, born in Paris, 1846.
[2] Anton Scharff, born in Vienna, 1845; died 1903.

of an ironmaster of Mulhouse and his family. Here we have a straight row of the family portraits, and as a background the great iron furnaces with their large chimneys; but how beautifully the smoke and steam emanating from the chimneys is depicted! His fine Marriage Medal made for the French mint will always remain a pure, ideal conception of a marriage ceremony. Scharff, on the other hand, was more of a realist. His "Village Schoolmaster," and many other of his works, are pleasing realistic conceptions drawn and modeled with wonderful accuracy, for Scharff learned to draw with such a delicacy of touch that one would almost mistake his drawings for those of Albrecht Dürer;[1] he was always a realist, whether his work consisted of a model or a drawing by pen or by pencil.

In striking contrast to the works of this French and this Austrian artist, let us pause for a moment to think of the nightmare of a circular mass of copper that was given as a medal by the Centennial Exposition authorities and what someone with or without assistance, made out of the beautiful Saint Gaudens models which were given 17 years later as an award at Chicago. The Philadelphia Centennial medal was not designed by an artist, and was minted by the man who made it; the Chicago medal was modeled by an artist, but its artistic feeling was eliminated by mechanical devices.

Since the death of Scharff,— whose medals number many hundreds — the leading medallist of the Vienna school is probably Rudolf Marschall. The following list of the more prominent representatives of this school, with a mention of the prizes and decorations they have received, shows that the excellence of their work has been duly recognized.

Anton von Scharff, born in Vienna, June 10, 1845; died in Brunn, near Vienna, July 6, 1903. Grand Prix, Paris, 1900. Gold art medal, Munich, 1901. Franz Josef Order. Order of Iron Crown.

Rudolf Ferdinand Marschall, born in Vienna, December 3, 1873. Gold Füger medal.

Josef Tautenhayn, born May 5, 1837. Large gold state medal, 1882. Franz Josef Order.

Stephen Schwartz, born August 20, 1851, in Neutra. Small gold medal, Jubilee Art Exposition, Berlin. Gold medal, Paris, 1900.

Franz X. Pawlik, born in Vienna, August 2, 1865. Two gold medals, Munich, 1901.

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[1] Albrecht Dürer, born in Nuremberg, 1471; died 1528.

Josef Tautenhayn jr, born in Vienna, September 10, 1868.

Peter Breithut, born in Krems, northern Austria, June 13, 1869.

Heinrich Kautsch, born in Prague, 1859. Gold medal, Munich. Franz Josef Order. Legion of Honor.

Ludwig Hujer, born at Wilhelmshöhe, northern Bohemia.

Rudolf Cizek, born in Vienna, March 12, 1867.

Rodin[1] works in clay; the model is then sculptured in marble or cast in bronze. He has created so many things by his fine touch and his artistic conception, which is so versatile and so marvelous, that he made up an independent exhibition of these in a specially built hall, outside the walls of the great Paris Exposition of 1900. This great gathering consisted of single blocks of marble or plaster forms, representing either a hand, foot, head, back, or some part of the body of man, woman or child. These were shown as one great gathering, but unfortunately without screening or partitioning off; and while each piece represented a master's work, the general effect upon the multitude who visited the exhibition was an impression of viewing the results of a terrible railroad disaster, and the work could be appreciated only by artists. Yet Rodin has also executed great complete pieces, perhaps nothing greater or more idealistic than his "Penseur" shown at the St Louis Fair — one of the finest artistic works of any time in its quiet, strong impressiveness. This statue has been acquired by that great American art lover, Mr Henry Walters. It would seem almost an impossibility for Rodin to make even one touch of his hand on a mass of modeling clay without creating some lifelike form.

How can we raise the general taste with the least possible expense and among the greatest number? How can we reach the poorest child in the most distant mountain home, and the rich man's son residing in a great city palace? There is no way by which we can do this with less expense than by having the designs of our coins, our currency and our postage stamps the work of the most eminent artists and having them executed by the greatest engravers of the time.

There is no way of spreading a taste for pure art in a community more wide-reaching and attended with less expense than by providing a coinage of the highest type. Our coins should be the creations of our greatest sculptors and in this way our currency would represent the most beautiful forms evoked by American art.

[1] Auguste Rodin, born in Paris, 1840.

These pieces pass through the hands of all, men, women and children, and whoever sees them unconsciously absorbs the pure artistic conception, and would no more tolerate the ugly and uncouth in art, than one who has become familiar with the best in literature would tolerate a trashy novel.

To show the great number of art objects that could be made in a year, we give the following official report of the coinage of the United States for the fiscal year, ending June 30, 1907:

COINAGE EXECUTED AT THE MINTS OF THE UNITED STATES DURING THE FISCAL YEAR 1907

Denomination	Pieces	Value
Double eagles	2 208 441	$44 168 820 00
Eagles	2 846 812	28 468 120 00
Half eagles	1 171 611	5 858 055 00
Quarter eagles	450 937	1 127 342 50
Total gold	6 677 801	$79 622 337 50
Half dollars	12 274 679	$6 137 339 50
Quarter dollars	13 436 525	3 359 131 25
Dimes	34 780 635	3 478 063 50
Total silver	60 491 839	$12 974 534 25
Five cents	47 642 750	$2 382 137 50
One cent	93 731 568	937 315 68
Total minor	141 374 318	$3 319 453 18
Total coinage	208 543 958	$95 916 324 93

Number of bills representing money payable to bearer, printed and delivered to the Treasurer of the United States, in the fiscal year ended June 30, 1907:

UNITED STATES NOTES AND CERTIFICATES PAYABLE TO BEARER

Denomination	Number of bills	Value
$1	107 296 000	$107 296 000
2	25 392 000	50 784 000
5	31 056 000	155 280 000
10	10 220 000	102 200 000
20	4 196 000	83 920 000
5 000	4 000	20 000 000
10 000	4 000	40 000 000
Total	178 168 000	$559 480 000

NATIONAL BANK NOTES PAYABLE TO BEARER

Denomination	Number of bills	Value
$5	17 508 776	$87 543 880
10	10 666 438	106 664 380
20	2 829 530	56 590 600
50	97 923	4 896 150
100	97 923	9 792 300
Total	31 200 590	$265 487 310

SUMMARY

Denomination	Number of bills	Value
$1	107 296 000	$107 296 000
2	25 392 000	50 784 000
5	48 564 776	242 823 880
10	20 886 438	208 864 380
20	77 025 530	140 510 600
50	97 923	4 896 150
100	97 923	9 792 300
5 000	4 000	20 000 000
10 000	4 000	40 000 000
Total	209 368 590	$824 967 310

The above is exclusive of the following:

UNITED STATES GOLD CERTIFICATES, PAYABLE TO ORDER

$5 000	1	$5 000
10 000	12 000	120 000 000
Total	12 001	$120 005 000

These lists that have been very courteously furnished by Hon. G. B. Cortelyou, Treasurer of the United States, and statistics given by Hon. H. von Meyer, Postmaster General, show that the United States government issued in the fiscal year ended June 1907, 208,543,958 coins, 209,380,591 bills, 6,923,875,575 postage stamps, 805,568,700 postal cards, and 1,368,323,750 stamped envelopes; in other words, a total of 9,515,692,574 coins, bills, postage stamps, postals and stamped envelopes in a single year. It requires but a glance to show that if the government would spend $100,000 per year on an artistic rendition of these objects, much could be done in an artistic way by this expenditure.

The following recommendations were prepared by a committee of the American Numismatic Society, of which the writer was chairman, and were presented to President Roosevelt for his consideration, with the hope of formulating a method to permanently obtain the best results.

ON A FUTURE IMPROVEMENT OF THE UNITED STATES COINAGE

In view of the great advances that France, England and other foreign countries are making in the matter of artistic coinage, we beg to offer the following suggestions for your most careful consideration:

That Congress be petitioned to authorize an entirely new coinage, which shall be artistic in design.

The entire coinage of the United States consists of ten denominations.

In order that the designs for the new coins shall be truly artistic in character, the best artistic talent of the country must be enlisted; and to this end it is necessary that these artists should receive a just recompense for their designs. We recommend therefore:

I That the sum of ten thousand dollars ($10,000) be appropriated for each special coin model, without regard to the monetary

value of the coin to be issued, whether a cent or a twenty-dollar gold piece, as it is as important to have the smallest coins artistic as the highest.

II That the six best designs received for each piece shall be awarded $1000 each from the above sum of ten thousand dollars, and that the committee, hereinafter proposed, shall have the right to select the best of the six designs, and to accept the model with or without modification by the designer, paying the successful competitor an additional sum of four thousand dollars. The cost of the dies for each coin would, then, not exceed $10,000.

III Artists may submit designs for each denomination in each metal, but an artist receiving a first award in one of the metals will not be permitted to compete for the other denominations in the same metal.

IV That the committee to pass upon the models for the coins shall consist of the President of the United States, the Secretary of the Treasury, the Director of the Mint, one member each from the Senate and the House of Representatives, three numismatists, one sculptor, and one painter.

The following further suggestions may also be presented as of practical importance:

V The coins need not necessarily be in very high relief. Some magnificent works of art have been executed in very low relief, as shown in the medallic art of the later centuries.

The coins should be of such size as to be commercially convenient, and should not be so irregular in surface as to afford opportunity for the accumulation of germs, and the consequent risk of spreading disease.

VI By no more direct means is it possible to awaken an artistic taste among the people than by an artistic coinage. The art educating value of such a coinage will be at once apparent, and the poorest child in the most obscure hamlet, or poorest tenement, would thus have the opportunity of knowing and seeing the works of the best living masters.

VII With regard to the expense involved, the National Gallery at London, the Louvre in Paris, and our own Metropolitan Museum of Art, would not hesitate to spend $100,000 for a single very important painting, on account of the educational and artistic value of such an object. The price of a single painting of this kind would replace our entire metallic currency with a coinage that would probably be unequaled in both beauty and utility by any nation on the

globe, and would do much to remove from the United States the reproach that we are not an artistic people.

VIII Without entailing an additional expense in minting our coins, if they were made of a metric weight, diameter and thickness, a coinage so stamped would aid this country in attaining a greater commercial rank, and assist in educating the children in metric values, a knowledge of which is absolutely necessary for them in the transaction of business in any other than an English-speaking country.

In this connection, we must not forget to acknowledge how much we owe to President Roosevelt for the encouragement he has given to the advocates of this cause and for what he has already accomplished in the direction of raising the artistic standard of our coinage.

France has long realized the importance and value of an artistic coin as a means of educating all the people in the least expensive manner; therefore such eminent medalists as Roty and Chaplin have designed her coins. The Austrian government also has recently encouraged artistic coinage in a limited way by ordering a die made of a coin on classic lines, a limited number of coins to be distributed to collectors at a somewhat higher price than their face value.

Verily may it be said that he is a wise sculptor who can recognize his own medal after his model is altered into a medal. It is just as essential for the artist to understand this as it is for the potter or enameler to know how his colors will appear after the firing and to know the final glaze that will be applied. For this very reason many of our modern sculptors are more successful when their models are cast in metal or cut in marble or stone by a cutter of another nationality and feeling, and when the artist is assured that his work is to be recast the same size, so that his final touches and lines will be retained and not eliminated by means of the file or hammer by a caster who may wish a smooth finish on all his castings, thus destroying all of the sentiment and feeling of the work. The final color or surface on bronze, gold, silver or other metal objects is of the greatest importance and a series of the Saint Gaudens 1893 World's Fair medals offered startling contrasts when finished in different ways in various bronzes and colors.

With wonderful precision the modern reduction machine, under the guidance of an artist, will reduce a plaster cast made for the machine from an artist's model in bronze or iron, from a size of 12

or 16 inches in diameter to the dimensions requisite for a medal. But it is absolutely necessary for the artist modeler to have a thorough knowledge of the differences in tone value between modeling wax, plaster and metal, when the subject he models is to be changed to one fourth or one sixth of its diameter and then reproduced in a medal of red, brown, golden or other bronze, or in bright or oxydized silver, in bright or dull yellow, green, or gold.

The coin of the future should be designed by a great medalist, if not by a sculptor of large work. Some men can never conceive a work of magnitude, but their product may possess the delicacy of a forget-me-not in contrast to a great sunflower; and medallic models need not be large. The die cutter of old, who worked with hammer and chisel, or with a free-hand graver, produced work that is today unrivaled. Did not Michelangelo cut his design directly from the great rough block of marble? He did not leave this to be done by a stonecutter, who smooths down or modifies the work of the sculptor to what seems to be perfection to his eye.

When the models for the new eagles and double eagles, ordered from the late sculptor and member, Augustus Saint Gaudens, through President Roosevelt, were submitted to the Director of the United States Mint, it was found impracticable to strike these coins in the relief in which they had been modeled by the sculptor. However, dies were made from the models and trial coins were struck. The models were then returned to Saint Gaudens, who executed new ones. Dies were made and trial coins were minted from these second models also, but they too were returned to the sculptor, and the gold eagle in circulation is from a third die.

The Director of the United States Mint caused two eagles to be struck from each of the first two dies, on the condition that they should go to some numismatic society. The double eagles from the first and second dies were also in high relief.

Through the courtesy of its vice president, Mr J. Sanford Saltus, these coins were presented to the cabinet of the American Numismatic Society, and will remain in its custody, except for the brief time during which they will be placed on view at the Augustus Saint Gaudens Memorial Exhibition of all his obtainable works, to be held in the Metropolitan Museum of Art, from March 2 to April 2, 1908.

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Through the courtesy of its vice president, Mr J. Sanford Saltus, these coins were presented to the cabinet of the American Numismatic Society, and will remain in its custody, except for the brief time during which they will be placed on view at the Augustus Saint Gaudens Memorial Exhibition of all his obtainable works, to be held in the Metropolitan Museum of Art, from March 2 to April 2, 1908.

As I have stated, the authorities of the mint found that the first eagle and double eagle were of too high relief; they also lacked a

proper stacking edge; that is, they could not be stacked with the ease that is necessary when large numbers of coins are to be handled in banking. In addition to this, with our present system of minting, the cost of minting a high relief eagle is greater than for one in low relief, and it is absolutely required that the coins shall only slightly vary in weight, although they are cut from plates of metal rapidly rolled out. The eagle must always weigh 258 grains, 900 fine, and the allowance for waste is only one thousandth, equaling about 1 cent on each piece. The actual waste in the gold coinage of the Philadelphia Mint during the fiscal year ending June 30, 1905, was only 6.97 per cent of this allowance. Hence we find there are some difficulties in executing artistic coins in high relief, such as the ancient Greek had abundance of time to produce and ample leisure to admire.

The thanks of the American Numismatic Society are due to Director Leach, of the United States Mint, for his uniform courtesy and for making it possible for these trial pieces to find a home in their collection, where they will be even more accessible to the numismatists of the country for examination than they would be in the United States Mint.

The United States Mint has now devised a machine which will weigh 100 coins per minute; this will be a great saving even over the rapid hand machine. They have also introduced a machine for opening and closing the sectional collars in striking the coins.

A metal chaser who has acquired a great and well deserved reputation is Jules Brateau of Paris. The following details are taken from an advance sheet of *La Bijouterie Française au xix^e^ Siècle* by M. Henri Vever, to whom and to the publisher, M. Fleury, we are indebted for this communication.

Jules Brateau was born in Bourges in 1844. In 1858, when he was 14 years old, the family moved to Paris, and he entered the workshop of Honoré, a master chaser, as Brateau himself puts it, "just as I might have gone to a shoemaker or to a tailor." However, he soon gave proof of his artistic aptitudes, and after serving his apprenticeship with Honoré, he followed the courses of the École des Arts Décoratifs and also frequented the studio of Nadaud. In 1869 he executed a fine bust of his master Honoré Bourdoncle and he was soon overwhelmed with orders from the first houses in Paris. During his long career he has executed an immense number of artistic objects, not only after designs that have been given him, but more frequently according to his own conceptions.

He has always been passionately devoted to his art and his fine and subtle talent has never failed to win appreciation; and although he has never confined himself to any school, he has often drawn his inspiration from the great masters of the Renaissance.

Many fine specimens of work in the precious metals bear the signature of Brateau, and a splendid sword executed by him was presented to M. G. Berger, director of the Musée des Arts Décoratifs, but he is best known as a worker in tin. It was toward 1878 or 1879 that he took up the tradition of François Briot, whose works he had long studied with care and attention. His first production in this metal was a Renaissance plate designed after an engraving by Théodore de Bry; this was exhibited on the occasion of a competition instituted by the Union Centrale des Arts Décoratifs in 1884 or 1885. He soon gained a complete mastery of the art, as was shown by his success at the Paris Exposition of 1889. Numerous beautiful objects such as ewers, goblets, plates, salt cellars, etc. have been made by him, and all are praised by both artists and amateurs. Almost all the leading museums of Europe have acquired specimens of Brateau's work, and in the Musée des Arts Décoratifs a special case is devoted to his productions. His mark is curious and ingenious; it is a gibbet (French, *gibet*) in allusion to the initials of his name; J. B. He was a member of the jury at the Paris International Exhibition of 1900 and was an exhibitor *Hors Concours*. His case of "Etain" was one of the features of the section of modern decorative art, and the collection of about 75 pieces, in its entirety, was acquired by one American art firm.

Some years ago a French collector brought to this country a medal or rather a locket, after the type of the Syracusan medallions. On it was a head of gold, not unlike that of Arethusa, which was classic in every respect. To carry out his idea that the medal was modern, and was a locket, he bored a great hole through one end and through this passed a heavy gold ring. An American collector saw this locket, and someone suggested that it looked like an antique. The collector seemed interested in the object, but when he heard it was modern, he laid it aside, all interest gone. Thereupon the dealer remarked: "Do you wish a man to be as dead as the artist who modeled the Syracusan medal before you appreciate his work?" This locket is now in the collection of the connoisseur who would have refused it but for that argument.

One word here about encouragement by an art lover that it was my pleasure to know; I mean the late Alfred Morrison[1] of London,

[1] Alfred Morrison, born in 1821; died in 1897.

who believed it possible that the finest things could be made at any time provided an adequate appreciation was given by the connoisseur to the worker. He was a great friend of Zuloaga,[1] the Spaniard who made such wonderful damascene metal work. They were together when they examined a wonderful key of the Strozzi Palace; one of the Rothschilds had paid £1200 for it. Morrison inquired of Zuloaga: "What do you think of it?" the reply was: "I could make a finer key." Morrison said: "Make it." And Zuloaga did make it, without the price having been considered. It was so satisfactory that Mr Morrison, upon seeing it, said: "Make a casket to go with it." When Zuloaga completed the casket it cost some £10,000. Morrison pursued the same course in his purchases of rugs, Oriental and European; or of lace, of which he had finer specimens than he could find in any museum; he was a prince of collectors and drew out the latent ability of the ironworker, the jeweler, the lacemaker and many others who had never before found such a friend.

There lived in London at the same time an Italian jeweler who was wonderfully clever in making quaint enameled and jeweled Renaissance rings. For many years one collector bought nearly one half of all his product, saying that some day it would be impossible to buy this man's work, and this collection has never been offered to the public.

It was at the Paris Exposition of 1878 that silverware of such beauty was produced that it brought an award of the grand prize to an American silversmith. The award of the grand prize and the cross of the Legion of Honor to the great jewel firm was mainly due to the fact that Edward Chandler Moore[2] had for many years applied himself to artistic studies, more especially to the Persian, the Greek and the Oriental. More than 20 times he had visited Europe and studied the art collections there and had become familiar with the beauties of the art of Persia, Japan and the Orient in general. That he was an art collector is evidenced by the Moore Gallery of the Metropolitan Museum of Art, bequeathed to the institution at his death, and that his artistic studies increased the value of his handiwork is felt to this day; and since that time American silversmithing has held its own with that of the world, rivaling that of Germany, England and Austria.

This American silversmith, who received the grand prize at the Exposition of 1889, when asked whether the workmen were French,

[1] Placido Zuloaga, born in Madrid, 1833. His father, Eusebio Zuloaga, born in Madrid, 1808, was also a metal and bronze worker.

[2] Edward Chandler Moore, born 1827; died Aug. 2, 1891.

German or English, replied: "We are employing the third generation of men who were our apprentices, and we have on our books the names of thousands of men who served an apprenticeship five years before we termed them masters."

A notable instance of the effect of travel and observation upon a mind naturally inclined to artistic studies is that of an American whose father was a merchant and jeweler; a successful man, known the world over. His father's profession had no attraction for him, and the father, with much foresight, allowed the young man to gratify his artistic taste. He traveled extensively in Spain and Morocco besides making the usual European trips. He became interested in painting, then in fabrics, stained glass windows, in woodwork and in bronze; for years he experimented with glass, producing quaint forms and wonderful combinations of color and iridescence, vieing with anything that had ever been found in antiquity. Later he combined glass with bronze, making industrial objects such as lamps and other ornaments, giving to each his artistic touch; and lastly he came back to his father's profession, jewelry. In a period of 30 years he has made for himself a name almost as widely known as his father's and has probably, directly or indirectly, produced more artistic objects of glass, wood, bronze and the various combinations than any one that has ever lived; I refer to Mr. Louis C. Tiffany.[1]

The work of Charles L. Tiffany, the father, his business career and that of the house of Tiffany & Company are fully described by George Frederic Heydt in his book "Charles L. Tiffany and the House of Tiffany & Company.[2]

William Baumgarten realized, on the abandonment of the former Royal Windsor Tapestry Works, that their usefulness had been allowed to die out gradually, owing to a lack of artistic management —and surely proper encouragement should have been given in England to a product so high in decorative value. Baumgarten, therefore, bought the plant and brought over some of the leading men to manage it. He took a personal interest in establishing it in the old snuff works on the Bronx, and trained young boys from the Catholic Protectory who showed an aptitude for careful loom-work, eliminating those who did not. The result is that for some 10 years the annual product has exceeded in value that of any single year of the original tapestry works, and some of the best

[1] Louis Comfort Tiffany, born in New York, 1848.
[2] Published New York, 1893. 8vo. 9 illus.

work of the century that now graces American salons is the product of the reincarnated Royal Windsor Tapestry Works.

We do not always realize the immense addition made by art to the worth of the materials used in artistic work, and how much is added to the value of the skilled mechanic's labor if he be trained in the execution of such work.

The German ironmasters of Munich, the Armbruster brothers, who obtained the services of an artist to design a great eagle grappling with a dragonlike monster, found an ironworker who could strike a blow with a sledge with such precision that he made an object which was given the leading place in the Court of Honor of Germany's great exhibit, and is now one of the principal ornaments at Mr George Gould's[1] Gregorian Court. The same amount of material forged into horseshoes by the same man probably would not have netted more than $100 or $200; as it was, the object could not be reproduced for $20,000.

A clever Japanese artist took $25 worth of silver and enamels, made an artistic drawing and faithfully reproduced this group of iron, in the form of transparent enamel, in a bowl of silver, making the object worth some thousands of dollars and creating a thing of enduring value, enough so to find a home in the collection of Mr Henry Walters of Baltimore.

In the same way the ancient wood carvers of box, pear, apple, olive and other woods, who carved them into medals with the exactness of their having been minted, or who carved groups of figures such as we see in the Waddeson collection in the British Museum, by their artistic education and application, have created out of a bit of wood, worth at the most a fraction of a dollar, objects of art that readily command at a European sale today, from $200 to $1000 each, centuries after they were made.

As John Ruskin[2] truly says: "All works of taste must bear a price in proportion to the skill, taste, time, expense and risk attending their invention and manufacture. Those things called dear are, when justly estimated, the cheapest; they are attended with much less profit to the artist than those which everybody calls cheap. Beautiful forms and compositions are not made by chance, nor can they ever, in any material, be made at small expense. A composition of cheapness, and not for excellence of workmanship, is the most frequent and certain cause of the rapid decay and entire destruction of arts and manufactures." My experience has proved

[1] George Jay Gould, born in New York, 1864.
[2] John Ruskin, born in London, 1819; died 1900.

that the American people are always willing to pay for costly articles if they have merit and their value is not an exaggerated, fanciful one; and in every capital of Europe there is a coterie of art lovers who maintain art in every form.

There are certain men who, through a natural aptitude and an inherited genius, or by intense application, become finger deft or finger wise; in other words, they have a touch in their fingers which they themselves can not explain, yet they can produce things with this touch that their minds can not see. It is this touch, whether applied by the pencil, the brush, the graver, the chisel or the hammer, on the canvas, in iron, or in plastic clay, that differentiates the artist from the mechanic.

In 1880 there lived in Dresden a German named Blashka, who devoted much time and thought to glass blowing. He later became interested in the reproduction of artistic and lifelike forms, and his son also became interested with him. He reproduced the Medusa, the Holothurians and many rare marine forms, magnifying microscopic things and reproducing them as faithfully as those that were of natural size. He became interested in plants, in fruits, flowers and seeds, and both he and his son reproduced them with equal aptitude. They took a trip of more than six months to the tropical oceans to study the marine forms. They were discovered by Professor Sargent of the Harvard Collection, and one of them devoted the larger part of his life to reproducing the plant forms which are shown in this wonderful collection.

Another instance is that of a man named Mueller who, some ten years ago, made small poppies and other flowers for table lamps; tiny candles were placed in them and they were objects possessing considerable merit. As the American Museum of Natural History desired a worker in glass to reproduce fine and delicate animal forms, he later became connected with this institution and his continued application and study led him to prepare a great collection for the Museum, which, like that of Arnold Arboretun of Harvard, shows what proper training will do for a talented and experienced glass blower who only requires the technical study which these men both enjoyed and furthered.

The models executed by Mueller were designed to illustrate soft-bodied animals which could not be preserved, more especially those which were of great scientific value because of structural peculiarities. These models have been made in the laboratory of the Department of Invertebrate Zoology, of which Dr W. M. Wheeler is

curator, although Dr B. C. Dahlgreen has immediate charge of this work.

Among the Protozoa, the models illustrate the various forms of Radiolarians, Infusorians, etc.; glass has also been used for the spicules in the representations of the sponges. In the collection of Coelenterates; anemones, hydroids, corals, jellyfish, etc. are beautifully and faithfully represented, and in the flat-worm alcove, we have enlarged illustrations of this group, so interesting to scientists and yet so little known popularly. The Rotifers and Polyzoa are shown by models largely composed of glass, and among the Echinoderms, the Holothurians. Besides all these, we have many models of the oyster and the quahog, and, lastly, the ancestral vertebrates are illustrated by representations of the Tunicata.

A quarter of a century ago, Sir William Crookes lectured annually at Edinburgh. At one of his lectures he exhibited some beautiful specimens of Venetian glass. A Scotch mechanic heard him lecture and a year later Sir William was surprised to find that the mechanic had taken up glass making. He became very much interested in the glass-making art and for many years made splendid specimens of this work, some of which Sir William bought annually, and which are still highly prized, although the glassmaker who made them has long since gone to the home of his fathers.

Bohemian glass. For over twenty-five years the Lobmayers, of Vienna, have paid strict attention to the reproduction of the most graceful and delicate forms of glass, which were engraved with such exquisite delicacy and perfection that the engraving has rarely been equaled even on rock crystal. They created objects of wonderful beauty and many of them were marvelous for their artistic lines and the technic of the graver's wheel. About ten years ago, however, this firm realized that it was almost impossible to obtain men who would take the infinite pains needed to do such work, finding that many preferred to devote their time to the swifter and more commercial work for which there has always been a greater demand with more recompense.

As early as 1885, the late E. C. Moore became interested in the engraving of glass in rock crystal style, and he created patterns, drawings and models and had them engraved; he interested the Webs of London, and they in turn instructed and encouraged a brilliant set of artists.

The work of Tschmar, who for a period was a most successful worker in transparent enamels combined with metals, found a home

in the greatest collections of America and Europe. His work possessed a character that was peculiarly his own, and his yellows, his blues and his reds were blended as no one had quite blended them before, and reminds one of some of the enamelled Arab lamps of the twelfth to the fifteenth century, that today are held at many times their value in gold.

No one has shown more appreciation for industrial art in the United States than has Mr Russell Sturgis.[1] An architect by profession and a born collector, he has a love for the artistic no matter of what material the object is made. His wide range of appreciation is well expressed in the chapters of his great contribution to this subject. This we learn by simply repeating the titles of chapters in his monumental work: *A Study of the Artist's Way of Working,* which is arranged into four divisions:

1st, The Nature of the Inquiry. The Work of the Lower Civilizations.

2d, On the Five Mechanical Processes; Carving, Modeling and Embossing, Painting, Staining and Dyeing, and Drawing.

3d, On the Several Fine Arts of Hand Work; Ceramic Art, The Vitreous Art, Metal Work, Leather Work, Textile Art, Embroidery, Building, Plastering, Joinery, Inlay and Incrustation, Mosaic, Engraving, Printing in Flat with Stenciling, Gem Engraving and Die-sinking, Caligraphy, Printing, Representative Sculpture and Its Kindred Arts, Representative Printing and Its Kindred Arts.

4th, On the Fine Arts Not of Hand Work; Decorative Treatment of Buildings, Decorative Treatment of Interiors, Decorative Treatment of Landscape, The Ignored Fine Arts, and Conclusions.

His delicate expression of appreciation of the workers is feelingly shown in the lines in dedication of these volumes, which read:

> Dedicated with admiration and undying gratitude to the many artists and skilled artisans — to the sculptors and carvers, printers and draftsmen, silversmiths and blacksmiths, potters and glassmakers, masons and joiners, printers and engravers, architects and decorative designers, who, during 40 years, have been my teachers in fine art.[2]

Among our American Indians, the Utes and the Sioux have been unusually expert in the manipulation of beads as applied to leather

[1] Russell Sturgis, born in Baltimore, 1836.

[2] Russell Sturgis Ph.D. A.M. A Study of the Artist's Way of Working, 2 v. xix, xvi. 666p. plates. 8vo. Dodd, Mead & Co., New York, 1906.

and to cloth; you are all familiar with this work. Some American ladies, among them Mrs Bayard Cutting, Miss Townsend, Mrs J. P. Morgan and others, conceived the idea of educating these Indians in a more artistic employment — of directing their ingenuity to the making of lace. That they have succeeded is well shown by the exhibits that were made in Paris and in Buffalo, a gold medal having been awarded in Buffalo for some laces that are well worth a place in the greatest household in the land. And what about the Indians in our New York State reservations?

Never have the homes of the rich in any land contained more remarkable decorations and furnishings, and perhaps many of them never in better taste, than at the present time in America. This has been the result of the habit of buying rooms of special periods, furnished from villas, churches, monasteries and palaces, and a single architect, who died in 1906, purchased dozens, if not hundreds, of such interiors. In this way, the work of the greatest carvers of wood and stone, of the greatest forgers of iron and bronze, and of the weavers of ancient looms, has been collected, single pieces selling for from $10,000 to even five times that amount.

Those wealthy Americans who frequently visit Europe, who know the world and its products, past and present, and who often cause costly objects to be created for them, are acquiring the choicest art treasures of Europe. The foreign museums, as well as collectors, are viewing this situation with such alarm that laws have already been passed, and they will be made even more strict in the future, to prevent the exportation of specimens of ancient or renaissance art. This is notably the case with the French government. This taste on the part of our people is reflected in their growing desire to have finer modern home decorations, and the architect, mentioned before, who died in 1906 and who supplied the furnishings for many rich homes, told me in 1905 that he had at that time 12 orders aggregating $3,000,000, an average of $250,000 each, for interior decorations and furniture, exclusive of either paintings, the house itself, or the land upon which it stood.

It seems clear that from Colonial times to about the period of the Civil War, our taste in architecture, furniture, metal work, and many similar branches of art manufacture, was far superior to what it has been with few exceptions since. Yet we have been glorifying in our growth of population, and our production and wealth. What reason can be found for this decline of taste? Perhaps we

may trace it in the very elements of our rapid growth, which has been in quantity at the expense of quality. May this not be due to two principal causes: the great influx of foreigners, largely of the mechanical but not of the artistic classes, and the consequent division of labor? Thus, where formerly were found neat, tasteful dwellings, fitted with furniture made by a village artisan, and with fireplaces ornamented with delicate brass and ironwork, perfect after a century of use, we now find that no one in the same village can do anything but the crudest work. The furniture the woodwork, the fireplaces, the whole house and its contents, are put up, and put in, by wholesale, as it were, from the products of manufacturing companies, and all opportunity and inducement for individual taste and skill are gone. Contrast a Colonial house, or a modest mansion of only half a century ago — with its graceful ornamental hinges, its carved panelings around door and window, its moldings on ceiling and stairway, albeit in plain materials — with the modern house that is put up by the real estate company, " in lots to suit purchasers," and which in every part is turned out by machinery and delivered to the contractor by wholesale. In my own home, in a village 5 miles from Peekskill, there is a mantle and some woodwork in the hall which are better than anything that has been made in Peekskill in the past 20 years; the house was built for Abijah Lee in 1820. I recently bought another similar mantle from an old rectory in the same village. These were made some 80 or 90 years ago by carpenters of the village Hiram Mabie and Theodore Strasbury, who were carpenters and wood carvers for a period of 30 years, who had seen only Colonial woodwork, and whose minds had not been corrupted by the sash, blind, and woodwork factories which have made the objects of which nineteen twentieths of the village is built. They are veritable wood butchers; it seems impossible for them to make a pure line, yes, more impossible than it would be for a savage whose taste is natural.

In the past quarter of a century the industrial art outlook has changed for the better; at our American Museum of Art, the Fine Arts Museum of Boston, the Chicago Institute, the Pittsburg Carnegie Museum, the Drexel Museum, Pratt Institute, Armour Institute, and dozens of others, in every large city, there is some opportunity for the young to see what has been done in the past; but to find a place for modern things, to place them by the side of the older models, is a task that rests with the present generation.

Most of all, the study of nature must be fostered and every endeavor must be made to advance to the utmost the industrial art of this country, both as a matter of credit and also for the gain which it will bring to our land.

There is no reason why we should not have art schools in this country for iron and glass in such places as Pittsburg or Birmingham; there is no reason why we should not have schools for leather and woodwork in St Louis or schools for gem-cutting and carving in Los Angeles. We already have textile museums in Fall River and New Bedford, and there are many other places in New England where a small technical school would do much to increase the value of the work of its inhabitants, enriching the community and paying back the investment many fold. It is important, however, that when the word "artist" is spoken of, it should not be construed in the sense that a portrait painter should teach a worker of brass or iron, or that an illustrator should teach a worker in wood or carving; they should be "industrial artists."

There is an industrial art unrest at work, and we read of attempts in this direction in London, Edinburgh, Buffalo, and in many other places. The arts and crafts are awakening to the necessity of more serious work. This will surely result in the development of competent artists, especially if they have an appreciative sustaining clientele.

Though much of the work of the Renaissance is incomparable, at the present time there is as admirable industrial work executed as there has been at any time. Varying periods, and new artistic conditions, have produced results that are equally satisfactory and are quite as unique, because they neither copy nor imitate the works of former periods. The fine ciselé work of the present time has never been excelled. Diamonds and precious stones have never been cut with such perfection, and some are so minute in size that they weigh from 150 to 250 to the carat, or from 15,000 to 37,500 to the ounce. They are set in designs with great accuracy of mechanical skill combined with artistic manipulation. Large and effective pieces have been made, containing many hundreds of stones that are set with a delicacy that has never been attained at any other period. It is the same in many other fields.

In silver, gold, or other metal, when the product is the work of an artist, a clever artisan will make combinations such as we see in fine chasing or repoussé work, or inlaying with other metal, producing an object that is worth from 20 to 50 times the cost of the

metal, and one can be sure that this will not be sacrificed to go into the melting pot of either the goldsmith, silversmith, or bronze-worker. Many such objects have been preserved for centuries because of their beauty.

In every community there may be men who are not physically strong, perhaps cripples, who could model an object of clay, engrave a piece of glass, or hammer out a piece of wrought ironwork. Artistic training given to these men would not only make them useful citizens, but would probably make them of more value to the community than their stronger brothers.

The word "artistic" need not necessarily mean French art, classic Greek art, Roman art, the Renaissance, Russian, Chinese, or Japanese art; it may mean any one of these, for if the artisan is taught by one of artistic perception, he may, with the same expenditure of energy and frequently with less, increase his usefulness from one to twenty times, and create articles of artistic value and not of common merchandise out of marble, bronze, gold, silver, wood, iron, glass, clay or wax; for when a master mind has kindled and brought out his latent artistic talent, the artist can only think and create artistic things.

We may here mention an instance of the effect of some artistic ability applied to book making as shown in the appreciation that has been given to that leader of the salvation army of book men, I mean Elbert Hubbard.[1] By means of his *Philistine,* the General Booth[2] of the book world, he has created and developed among many well to do people a taste for books which they have frequently gratified and have raised to even a higher plane than that to which he had brought it. By a little artistic taste in the type-setting, in the printing, in the coloring and in the binding of his books, he has made it possible, in such an out of the way place as East Aurora, to produce an industry which has given employment to many, and has done much to foster the love of good books among those who probably never would have heard of them otherwise.

As an illustration of the practical inconvenience which may result from a lack of the proper diffusion of artistic education, we may note the deadlock between the Municipal Art Commission of New York City and the Department of Bridges. The Bridge Department thinks that it can make a design for a bridge which will be serviceable and at the same time possess sufficient beauty for a

[1] Elbert Hubbard, born at Bloomington, Ill., 1850.
[2] Gen. William Booth, born at Nottingham, 1829.

public purpose; the Municipal Art Commission, on the other hand, maintains that if a bridge is dedicated to the commemoration of the discovery of the Hudson river, and if this bridge is to occupy so important a position as to be the connecting link between Manhattan island and Westchester county, probably to remain for centuries as an object for critical inspection, it must possess artistic lines of beauty as well as strength; therefore, they have declined the designs in several instances and this great work has been kept back for years, because apparently there is no one in the Bridge Department who has combined a study of art with his technical education. The Municipal Art Commission would surely welcome a design of beauty, and we are now promised a design for a reinforced cement structure, giving a possibility for graceful lines much greater than would be afforded by a structural material requiring a geometrical make-up.

A word in regard to pottery and porcelain in the United States. Each succeeding exhibition has shown us that in a new state two or more deposits of clay adapted for pottery purposes have been found. In many instances and in a number of states various amateurs and artists have interested themselves in the working of these clays for artistic purposes, and among these many have produced work of great merit. One of the pioneers in this field is Maria Longworth (Mrs Bellamy Storer), who initiated the manufacture of what is known as Rookwood pottery, the product of which has been of so high a character as to have received grand prizes at great expositions in Paris, Turin and many other places.

The Greuby Pottery of Boston has confined itself to the production of dull grays and greens, and more lately it has become interested in the working of pottery for interior decoration, such as that used in high class bathrooms and stations for the subway.

Kilnfire reds have been produced by Robinson of Boston in vivid colors, often with wonderful metallic reflections. There are dozens of potters, but space will not permit me to more than mention a few of them.

One word in regard to expositions. Shall we have no more of them? Have we had enough of them already? In view of their immense value in disseminating a taste for and a knowledge of purer industrial art, I firmly say *no* in answer to the latter query. Let us have them as often as in the past, and it would be well if we could have those of a certain type even more frequently; I allude to special exhibitions in which only a single industry is repre-

sented, as, for example, the manufacturing of leather into shoes. In such an exhibition illustrations might be given of the animals furnishing the hides as they appear in their natural surroundings and habitat; then the raw hides could be shown as well as examples of the various means of dressing and preparing them used by different peoples; and, finally, there could be a collection of foot wear of all types and styles, from the flat sandal of the Roman to the high-heeled shoe worn by the French and Chinese lady. We should then see the varieties of upper leather from that of the simplest Indian mocassin to the ornately decorated shoe of the Tartar or the elaborately embroidered one favored by the Russian lady. What valuable information could be gathered by a young man engaged in the shoe industry after one hour's study of such an exhibition! How much more he would know in regard to the shape and requirements of the sole of the shoe — an object too often neglected, because it is out of sight — and how much better he would be equipped should he become in later years the foreman or even the manager of a shoe factory. It is quite safe to say that he would know more than 99% of the shoemakers of the United States who have grown gray in the trade. It is true that the shoemaker's trade is not an art, but everything that is worn by man is susceptible to artistic treatment and has its influence on the general effect produced by a costume.

In expositions of the French type, where gilds or a number of men engaged in a profession pass upon the exhibitor, who is only permitted to present what represents true progress, whether artistic or mechanical, no one would be permitted to erect a building 40x60 feet in length, as was witnessed at the Jamestown Exposition, the entire object of the large structure being to house a collection of furniture, cut glass and other material, representing prizes that a large soap company award in return for coupons obtained by purchasing their product. The French make retrospective exhibitions of every object of industry possessing merit, dating from the earliest time to 50 or 100 years preceding the exhibition.

That men with artistic instinct have existed at all times and in all nations is evidenced by some of the wonderful objects made by the aborigines, such as the great paddles from the Harvey islands, gracefully decorated with carving that is never wearisome or monotonous, and these objects are eagerly sought by the collector who appreciates beautiful handiwork.

Who has taken, or who will ever take the place of the ivory carver, Moreau-Vauthier, whose every work was so excellent that they all found a home in the collection of one of our greatest connoisseurs. He bought from the estate all the works that this artist had left and in the whole number there was not one showing poor workmanship.

The membership of the Société des Arts Décoratives of Paris is made up of lovers of industrial art, and the leading artists who devote their time to industrial art, as well as the heads of firms who devote their commercial activities to its production, receive encouragement from this society by the purchase of one or more pieces of the highest artistic value each year. This has been done for some 20 years, and the wonderful collection of art objects which they gathered and displayed in their three rooms at the Paris Exposition of 1900 presented a startling array of meritorious works produced by contemporaneous artists. This exhibition was so much appreciated that the municipality of Paris permitted the society to use part of the magnificent marble palace known as the Musée Galliera to permanently house its collection, and every year, in addition, an exhibition is held of some special class of work such as jewelry, lace, leather work, wood carving, etc. In this way examples of all the finest known products are brought together for the education of the artist and the artisan as well as for the pleasure of the collector and art amateur.

A retrospect of art, both of fine and of industrial art, reveals the many landmarks where some individual of original power of thought and ability has founded a school or industry, making his place of birth, or his later home, famous for the products of his genius. These men have belonged to no special time, place, class or religion; but their inspiration has made their own work great; they have inspired others who have carried out and developed their art; and in some cases the pupil has been greater than his master.

Such periods of artistic achievement were always either the outcome or the forerunner of commercial greatness. Their areas have varied in extent; but generally they have included less than one half of the European continent. The means of travel were slow in those times; but at present the farthest point of the world is scarcely more than a month's journey away. If, therefore, great artisans the world over were brought, a few at a time, to a great central institution of art, there to create their masterpieces with the leisure requisite for perfect ideals, as the great masters came to the kings

and nobles of old, we should have as a result the finest art products of the age. And still more — with such instructors the picked students would be inspired, and like the students of the olden time would carry out the tradition of their masters, and perhaps become even greater than they. Their works would command the attention of the entire world; and a class of men would be developed in the special fields that sorely need them, creating productive works and preventing the outpour of millions of dollars yearly to foreign shores. There never has been a country more affluent than is our own today, or a people more anxious than ours to obtain, and more intelligent to appreciate, the finest handiwork of man, or the richest products of nature transformed by his handiwork. Nothing is too expensive for such patrons of art, providing it has true merit. The fact that European art collectors are alarmed at the absorption of old art treasures abroad testifies to this, and many a modern European artist has received his first substantial encouragement from an American or from a dealer who was representing one. No less an artist than Barye[1] was discovered and encouraged by the late W. T. Walters.[2]

It would take more time than is at my disposal to go fully into all the details of such an industrial art institution. But among a few of the principal things — essential and beneficial requirements — this institution should have a shop for casting large or small bronze, copper, iron, tin or other metals; a smithy where iron or other metals could be forged, either massively or like the most delicate petal; a filing room, to produce anything from a gigantic gate to a small key, and in steel, iron, brass or other required material; kilns to fire the finest porcelain vase or the rudest bit of faience, and the means to decorate these with any known or new glaze; a verrerie, where every known form of glass could be worked, whether blown, molded, engraved or etched; a wood-working shop for the carving of choice objects, great or small; a press to strike medals and allied material; a printing room for the creation of special types and illustrations, and presses of various kinds to teach printing as a fine art in every branch; and a bindery perfect in every detail, to bind the simplest or the finest book. Special artists should be secured as teachers, to remain only for definite periods of time; and students who possessed true talent,

[1] Antoine Louis Barye, born in Paris, 1795; died 1875.

[2] William Thompson Walters, born on the Juniata river, Pa., May 23, 1820; died Nov. 22, 1894.

though only partly developed, should be placed under their care. Correct instruction in drawing and modeling would mean much for such an institution.

There should be the means of keeping living objects of various kinds on hand, in order to supply the artisan with true models from nature. Material of little value would thus, by skilled handiwork, be changed into work of priceless value. It is knowledge and skill like this that adds so much to the wealth of France and Austria.

This ideal school of industrial art should be under the direction of a man well acquainted with what is best and greatest in the various lines just indicated. He should have some familiarity both with the teachers and the students, and a full knowledge of the possible demand for their work. Rightly administered, such an institution should, within five years, make itself known and felt in all parts of the civilized world.

The title N.A. is the ideal of every American artist just as the English artist aspires to that of R.A. At present, to what can an industrial artist aspire? Why should not an annual exhibition of industrial art be held in the City of New York, and why should not I.A.A. (Industrial Art Academy) or I.A.I. (Industrial Art Institute) have an equal value with the other titles?

Criticisms have been frequently made that Americans are not art lovers, and a number of foreigners assert that Americans are buying fraudulent antiquities and that they are responsible for the thefts that have occurred and for the breaking up of many collections. The fact that these collections are absorbed by the United States is only an evidence of the desire on the part of the American people to obtain the best material, of ancient as well as of modern art, and no laws that may be enacted by any foreign government, and no barrier or dam that they may erect, will prevent art objects from gravitating to the place where the collector or museum is ready to pay the greatest sum of money.

It is the abuse of the customs laws, frequently due to representations made by unscrupulous dealers, that has had much to do with the placing of all art objects or pretended art objects on the same level. Unfortunately, the duty is not imposed on a price that represents the actual cost of the article when made, but on that at which the article is invoiced, so that on a scarabaeus costing $10 to make, and which commands $200 on account of its antiquity, the duty is not levied on the $10, but on the $200. It is the same with the painting for which the artist may have received $1000; because

the collector has paid $20,000, $50,000, or $100,000 for it, the duty is placed not on the cost of production alone, but also on the value of the object as an antique. There is no doubt but that this is a great injustice and it is certain that, if some arrangement could be made by which a given duty would be placed on all art objects, whether bronzes, statues, or paintings, this duty being imposed on the cost of production and not on the acquired value, many treasures of art would come to this country. We know of a single collection, representing some millions of dollars, that the owner has finally decided he will never bring to this country on account of the existing custom laws. There is no doubt that this is a great injustice to art lovers and art students, as well as to the generous collector who would be willing to buy objects of art. The placing of such a duty on art objects as is here proposed would prevent the bringing of the poorer works of art to this country, as in that case, no matter what the quality of an art object might be, there would be a fixed sum of duty upon it.

THE CONVOCATION DINNER

The Ten Eyck — Friday evening, October 18

THE NEW EDUCATION

HARRY PRATT JUDSON PH.D LL.D., PRESIDENT CHICAGO UNIVERSITY

A fact familiar to all thoughtful teachers is the inevitable tendency of education to become a matter of routine. The teacher has with him a constant succession of youth, "the everlasting boy," presenting apparently an endless sameness of character and conditions; and following the line of least resistance, the teaching is apt to be a presentation of the same things taught in the same way year after year. Naturally the teacher gets a certain facility in doing things which he has thus done many times, and it requires the minimum of effort to repeat, while to devise a new way takes time and trouble and weariness. The German professor who prepares at length a course of lectures may read them without change for 20 years, thus relieving his time and strength for the writing of books. The American professor who taught mathematics for 30 years in a small New England college became so thoroughly set in his ways that the textbooks, handed down from class to class, were annotated with the illustrations and witticisms to be expected at any given point — and expectation was never disappointed. The good man's mind acted under the familiar principle of the association of ideas and when a certain topic was reached, the jest, doubtless not in his consciousness for a full calendar year, was automatically suggested and spontaneously repeated. It was no longer wit, but a bit of interesting mental mechanism. This is significantly illustrative of the strong tendency to which all teachers are subject — in many cases irresistibly subject. In short the tendency of the profession is to convert the teacher into an efficient, smooth running, automatic machine.

There is of course an undoubted benefit to be derived from this phase of education. There is a saving of time for the pupil — he is led rapidly and readily along a beaten path. The teacher knows in advance all the difficulties, and just how to meet them. The teaching, as teaching, may be, must usually be, on the whole far more effective. It becomes what the schoolmaster is apt to call

"drill," and the results, especially as tested by examination, may well be brilliant. The routine efficiency of the veteran teacher is in fact a species of professional expertness, and has elements which are little short of indispensible.

But this picture has another side. In not a few teachers routine dominates — it is not that the teacher has an effective method, the method has the teacher. He loses initiative, he ceases to grow intellectually, he is no longer alert and flexible. Sooner or later the processes become unintelligent, and the pupil is merely ground remorselessly through a soulless machine. Society develops, new conditions arise, new social forces are operative, new knowledge illumines the world. But education does not sensitively respond. The inertia of routine is hard to overcome, and like the tides of the ocean, education is apt to lag behind the pull of the forces of progress.

But the world changes. Knowledge broadens ideas and quickens intelligence. Society assumes new forms, and creates new ideals. Sooner or later revolutions reach education also. The young must be prepared for the future and not for the past. If then the coming age differs radically from the past, education must be reconstructed accordingly, both in aims and in methods.

The Renaissance was a wonderful quickening of the intellectual life of Europe. The old knowledge, so long lost, was recovered, and the Greek writers seemed to afford an inexhaustible store of riches for the mind. Men once more began to think, and there seemed to be a new heaven and a new earth. Presently the old monkish schools were seen to be inadequate for the new age. A new education was created, an education in the literature and the knowledge of Greece and Rome. The classic masterpieces of ancient thought became the material of the new training — as fresh, as in vigorating, as full of power, as if they had all been newly created. Schools and colleges were revolutionized. But the institutions of learning did not lead in the new movement — they responded, somewhat tardily, to new social ideas, thus at last aiding in the revival of learning — and aiding powerfully, no doubt. Still, their status was secondary and subordinate — they did not create.

The last two centuries have been marked in the history of thought by a marvelous development in material science. The discoveries and their applications have again revolutionized society. The whole method of thinking has been transformed, and human life has attained vastly greater powers. A new world was opened

to Europe by the adventurous voyages of Da Gama and Columbus. A far wider world has been disclosed in our time by the revelations of science — a world, unlike Asia and America, which seems to have have no limit. Aerial telegraphy, radioactivity, anesthetics and the mastery of bacteria, merely hint at some practical uses of a portion of the new knowledge. The currents of modern life run strong and full, and they are no longer pent in by narrow bounds. Who can tell what may be the achievements of the next decade even? The limits of human possibility have vanished beyond the scope of the vision even of thought.

As the 20th century opens with this wonderful new aspect of life and its activities, it becomes plain that education has already responded, and to a large extent has already been re-created. The college curriculum of a half century since and that of the present are bewilderingly different — different in content, in aims, in methods. The old time classical academy and the modern high school are as strikingly unlike. The catalogue of Williams College for 1837–38 lays down these requirements for admission: "Candidates for admission to the freshman class are examined in geography and vulgar arithmetic; in English, Latin and Greek grammar; in Virgil and Cicero's *Select Orations;* in Caesar's *Commentaries,* or Sallust; and in the Greek Testament and Dalzel's *Collectanea Graeca Minora,* or in the Gospel's and Jacob's *Reader.*" I leave it to the schoolmen present to compute the time required to master these specifications, and to comment on the absence of English, of history, of science, of any modern foreign language. The college curriculum for the same year contained in the main Greek, Latin and mathematics. There was one term (one third of a year) of chemistry, two items of natural philosophy, one term of astronomy, a few stray lectures an anatomy, mineralogy and geology. There was one term of French, which was made optional with a corresponding amount of Hebrew, or of mathematics. It may readily be presumed that student laboratories did not exist — with the honorable exception of an astronomical observatory, in which the use of instruments might be learned. This observatory was new in that year. One of the last subjects in the senior year was "Leslie's short method with deists." Again I leave it with schoolmen to contrast this college course with that of today, and to put in the balance the graduate of a modern high school of superior quality with the college graduate of 70 years ago.

The reconstruction of modern education has within the last generation gone on rapidly and has indeed gone far. But the process has by no means completed its cycle, and it may be worth while for us to consider whither it may be tending. I do not expect unanimous agreement, perhaps not general agreement, with what seems to me the goal in sight. I can only point out the situation as I see it.

It seems to me that education today has distinctly a new point of departure and that we are in the process of developing a new interrelation of schools. The old lines are melting away, and, rigid as an educational system is bound to be, gradually a new system is taking form. What are the facts?

We may safely begin with the postulate that on the whole experience seems to show that education works from above down rather than from below up. In other words, in the development of educational activities it is the colleges which influence the development of secondary schools; it is the high schools which strongly influence the development of the common schools. Of course any of these graded schools might exist and in many cases have existed without those above. The attractive influence however of higher institutions on lower has always been strong — indeed irresistible. Within my own experience some years ago, the entire high school system of the state of Minnesota was so directly stimulated by the action of the State University that within a very few years the number of high schools was multiplied by ten and their efficiency was multiplied by even more than that. In other words, without the State University there would have been throughout the state a small number of high schools, a few strong and more feeble, and all lacking coordination and impetus. Under the influence of the university the state has many high schools definitely coordinate with a common purpose and common ideals and liberally supported.

In the light of this well known fact we must consider at the present time what is the actual point of departure for educational advance. This I think undoubtedly will be found in the present day highest conception of a university. Of course we use educational terms loosely in this country, almost as loosely indeed as we give academic degrees. Still out of all the confusion there is emerging a very definite idea of a university which is quite different from the conception of that institution in past generations. From this point of view the university is not primarily, as in Oxford, a group

of colleges. Nor again is it necessarily merely a group of professional schools. Again it is not altogether and fundamently a place for teaching. The two thoughts underlying the modern university are these: First, the institution must contain a faculty of specialists who are engaged in active production. In other words, they are busily investigating various fields of science and seeking to discover new knowledge. Ideally the university would cover the whole field of thought and should be composed of investigators in every field. Practically, however, it may easily be the case that in a given institution some fields are more strongly developed than others, while some fields may be wholly neglected.

In the second place, corresponding to this investigative and productive faculty of specialists, there is a body of students who in turn are learning to be specialists. This involves on their part the mastery of given fields of knowledge in the first place, and in the second place learning for themselves to become original workers within their fields. Obviously this body of students form on the one hand the advanced professional schools, and on the other the so called graduate schools. By advanced professional schools of course I mean those which are not intended as short cuts to a profession, but those which, based on a thorough preliminary training, aim to develop only the strongest professional specialists. By "graduate schools" again we mean the aggregate of students who in like manner are becoming specialists in any or all of the various departments of knowledge, outside of the different specific professions, like law and medicine. The term "graduate schools" has been used in this country as a mere practical convenience. It is not perhaps unlikely that, in the natural evolution of our universities in the larger sense, this temporary designation will disappear, as the need for it is lost. A school of chemistry, of history, or of classics, planned for the development of the most advanced specialization, is no more and no less a graduate school than is an advanced school of law or medicine. The requirement of a baccalaureate degree is an incident in the more vital character of the work.

It will at once be seen that of the university as thus understood the college is by no means an essential part. That the college exists in all our universities is an accident resulting from the history of university evolution. Real universities in some cases have grown from mere colleges, by reconstruction and the superposition of the university idea. The college therefore remains as an organic part

of the university. In other cases newly created universities have found it necessary to establish a college, partly to supply local needs, partly to secure well prepared students for university work. But so far as distinctive university purposes are concerned, these colleges might disappear without detriment.

In such institutions the college is assuming a new character. The college degree is no longer the acme of scholastic attainment. The college senior is no longer the dignified being of former generations — he is in fact but a beginner in the university. Thackeray points out in his inimitable way the value to a young man of association with his superiors. The college senior in a real university has this advantage — he is chastened in his own estimation and no longer looks at the world from a hight.

Moreover the university idea permeates downward. The college professor is less inclined to teach dogmatically, the college student is getting more in the way of at least elementary original work. The college horizon is further away from the center. The bumptious college graduate of Horace Greeley's day is rather rare now. The university has chastened the college. Moreover, the college curriculum as it now exists overlaps to a considerable extent the real field of the university and at the same time includes within its scope not a little which in content and purpose belongs essentially to the secondary school. So far as the college student devotes his time to making a large advance in the mastery of specific subjects, he is entering on university work. So far as he is seeking a general training, and is providing himself with the tools which he may need in ultimate specialization, he is in fact merely extending his academy course. In short, the college course falls roughly into two parts — one of subjects which may quite as well be handled in the secondary school, the other of subjects which are university in character and treatment. What follows?

In the first place, schools are being created which cover the customary four years of the usual secondary school, and in addition the first two years of the usual college course. The graduates of such schools easily enter at the middle of a college course, and may well be ready to enter on special studies of university character. In Illinois two largely endowed schools of this kind, the Bradley Institute in Peoria, and the Lewis Institute in Chicago, are now well established. Many large public high schools already offer courses in advance of the regular four years curriculum, reaching in many to the amount of one year, or in some cases of two years.

In mathematics, in classics, in modern languages, in not a few other subjects, such schools may easily be equipped to do the same work done in most colleges, and to do it quite as well.

Further, wherever such extension of the work of a high school is locally practicable it has also a decided local advantage. Many young men and women finish their schooling with the high school because there is no local college at home, and because they can not conveniently leave home. Proper facilities for extending their studies in the high school would at once attract many who otherwise would stop short of the attainments which they really desire.

Morever, rounding out in this way the course of study it may fairly be inferred that a reasonable number would desire to go further, and thus that still more in the end would enter college. This is the constant experience of the schools to which I have referred. The high school is often called "the people's college." It would indeed be that, should it carry on its work to the legitimate academic end. There would then be a direct connection between the academy in this sense and with this purpose, and the university as we now understand it.

I do not mean to imply that there should at once be a cleavage in an established college, the first two years being relegated to the secondary school and the rest being fused with what we call a graduate school. This may be the outcome in the future. But it seems to me quite likely that there would be an increasing number of high schools and academies which will cover more than the present four years course — that more and more the colleges will accept such work for advanced standing — that thus in time there will be an increasing number of students who enter college to go directly into real university work — and that thus in such institutions the emphasis will fall more and more on the university idea. Taking the nation at large, educational systems are not created — they grow. It seems to me that we see here the direction in which the new education is growing.

We often hear it objected that the colleges exert an unfortunate influence on the secondary schools — that the latter are dominated by the college idea, while in fact the vast majority of high school students never go to college at all.

Whatever truth there is in this seems to me to come from the rather narrow view which we college men are apt to hold of the character of a college preparatory course. Is it not reasonable to maintain that any boy or girl who has passed successfully through a

full four years course in a good high school ought thereby to be prepared for admission to college? Ought not the college course to be so flexible that any such student should find a place and be able to enter profitably on some course of study? He may have less of some desirable things than maybe he wishes, but does it not follow that ipso facto he has more of others? May not the first two years of the college curriculum be arranged as a sort of clearing house, whereby subjects may in the end be practically equalized?

In short, when our high school curricula get to be somewhat less scrappy, and contain more well digested systems of study, and when on the other hand our college curricula and entrance requirements are more elastic, then the objections which I have mentioned will vanish. A school training which is good for life ought to be good for college — and a training which fits a student to enter college ought to be a good preparation for life. There is no incompatibility.

But in the new secondary schools, in the new college, in the new university, is culture to be lost? Culture is, or ought to be, an incident of any well devised course of study. It can seldom be sought directly. Like fame, when grasped in the hand it vanishes. Under any plan our institutions of learning will always graduate a certain proportion of uncultured men. Culture will always be found in the adequate pursuit of truth, whether in Greek or in chemistry. We need not despair.

The essence of the new education which has taken form under our eyes, then, I conceive to be three things: The first is flexibility in schemes of study — a breaking up of the old time rigidity in curricula, and in the organization and interrelation of school, college and university. The second is special knowledge on some specific subject — the educated man should know some one thing, and should know it well. The third is the power of self-direction in getting at new ideas — in other words the power to solve problems. He is well trained who meets them fearlessly and who solves them promptly and accurately. That, in science, is the immediate end of the university. That in fact is the ultimate end of all education. To that are tending the dissolution of old educational forms and the evolution of new ones, which so dismay some of us. That is the real meaning of the new education.

EDUCATION AND CITIZENSHIP

HON. WILLIAM NOTTINGHAM PH.D. LL.D., REGENT OF THE UNIVERSITY OF THE STATE OF NEW YORK

In an assemblage like this composed chiefly of those actively employed in training the youth of the land, it may not be amiss to speak briefly, from a practical standpoint, of the relation of education to citizenship. Aware, as we must be, of the power and efficiency of education as a benevolent force among us in molding and directing the individual, it should, we would naturally infer, be given the widest influence in that higher sphere of activity embracing his relations to the State. But strange as it may seem, until a comparatively recent date, where there should have been in these things a close alliance and active cooperation, unreasonable estrangement and jealousy have instead existed. Within the memory of most present the "literary feller" was the subject of contempt in the field of practical politics, scouted as an interloper, and scoffed at as impractical and useless. The source of this prejudice manifested itself also in other ways. Not many years ago, in a not far distant city, a very effective argument was made against a learned and accomplished candidate for Congress based upon the broad ground that he dined at 6 o'clock in the evening instead of at noon. This may serve as a note of caution to any among you who may have political aspirations.

More recently, however, in the behalf of which I speak a remarkable change in popular sentiment has taken place. You have all doubtless observed this. The increased facilities for university education, the higher standard of attainment required for entrance to the learned professions, the multiplication of technical schools, and the demand for better training in all the applied sciences and greater skill in the industrial arts have worked together to spread among the masses the desire and respect for advanced education along all lines. No more beneficent thing could happen to our people, and no better assurance be given of permanent progress.

A very eminent publicist has characterized our country as "a land of change," and for that reason declined to make any prognosis of our case or definite prophecy concerning our destiny as a nation. It may be that the shifting of public opinion upon important ques-

tions has given some warrant for this criticism, but we believe that the result has been a gradual trend in the right direction.

Our situation is peculiar and can not be compared in natural conditions with that of any other country. We have a land that is wellnigh limitless in extent, boundless in resources, and yet but partially developed. In these respects we have no parallel among civilized nations except perhaps in the case of Russia. This fact, and the freedom we afford, make us the land of opportunity, the refuge of the discontented and oppressed, and the Mecca of the wage earner of the world. Hence arises one of the serious problems that confront us, growing more serious, the vaster we become. In the last two years more than a million immigrants annually have landed upon our shores. We can not truthfully say that they are from the best classes of the countries whence they come. Those who are contented and prosperous do not emigrate. During the several centuries past our domain has been gradually settled, mostly by the various nationalities of Europe. Their amalgamation here has left us a people so mixed that we have been fitly characterized as an "ethnic stew."

From this commingling of the races there has sprung a distinct nationality called the American people, with all the attributes of an advanced civilization, and having the best representative government on earth. This result must be attributed in a large degree, at least, to two causes. In the first place it is doubtless true that without this mixture of the races the United States of America would never have existed, or else, long ere this, would have crumbled into pieces and passed from the family of nations. In the second place, it is just as probable that without the common school republican institutions on this continent would have long since fallen into decay or lapsed into despotism. As we travel through our country from the Atlantic to the Pacific, we can not fail to note the significant fact that in every community, city and village through which we pass, whether by the lake or the river, upon the plains or in the mountains, the schoolhouse is one of the best buildings we see. This is the emphasis placed by our people upon the value of education as a conserving and uplifting force. This fact should give us confidence for the present, and assurance for the future.

The questions that I am here to ask, and try briefly to answer, are; first, do we as a people secure the maximum benefits of the school — are we giving this institution its fullest possible effect upon the citizenship of the nation? Second, are we so protecting the personnel of our body politic as not to handicap its influence?

It can be said in reply to the first suggestion that we have commenced to do something in this direction. But we can, and ought to do, much more. We have ordained June 14 as Flag day for the public schools. The ensign of the government floating over the school buildings of the land is a grand sight—a source of patriotic inspiration. But we must needs pursue this lead farther and dig deeper to reveal the pure metal we seek. The school should be the outspoken, aggressive, fast and unfailing friend and ally of the nation, and the source of its most fervent and intelligent patriotism. A place should be found somewhere in the curriculum for a political catechism. If it is important to teach the rising generation in the schools of the dangers from the use of alcohol and narcotics, is it not also the highest wisdom to instil a genuine love of country and a knowledge of the simple principles of good government? A teacher should be considered remiss in his duty who allowed his pupils to depart from the sphere of his instruction without having a deeper affection for their native land and reverence for its institutions, a settled belief in the sacredness of the ballot and the duties of public office. Our educational institutions, from the lowest to the highest, should be the recruiting offices for the best standing army that a nation can possess, a conscientious and intelligent citizenship. Under such a régime I should hope that after a time we would not be compelled to confess a weakness in any respect of representative government; we should not be longer called upon to apologize to the intelligent observer from foreign lands for a lamentable failure in the government of our cities; I should expect that under such instruction and discipline a new generation would arise to take charge of the ship of state in whose minds indifference to political duties would be a disgrace, and corruption, treason.

To the second inquiry a less satisfactory answer must be given. If we expect through the agency of our schools to re-create, energize and elevate the body politic, we should not nullify or impair their influence by undesirable recruits from other sources. In the organization and conduct of government in this country, both state and national, we have been wise and prudent in many things; but we have certainly been very prodigal with the ballot. Our course in this regard has been sometimes marked with scant consistency. While we have in most states denied the franchise to the intelligent and patriotic womanhood of the land, we have at the same time

extended it to the alien but recently arrived among us with scarce a superficial scrutiny of his qualifications or character. For the comfort of the ladies I might say, however, that the present limitation of their political rights may be somewhat due to the reluctance of their own sex, for upon the Isle of Man full suffrage is granted to woman.

Futhermore, our naturalization laws have been unsatisfactory, and the administration of them lax in the extreme. To be convinced of this but a casual glance is required at the crowds which throng the courts just before election seeking admission to citizenship, and manned usually by a local politician or more likely by a "ward heeler." The oath of the applicant is perfunctory, and little understood, and the corroborating affidavit of a friend readily procured. This generally ends the ceremony, and the process of making a citizen is brief but complete. Of what avail are laws to prevent corruption at the polls while we supply the material upon which it thrives! We have noted, however, with satisfaction that one of the judges of the Supreme Court of this State has recently radically changed the usual methods pursued, and rejected the applicant who could not respond to an intelligent examination.

Citizenship is conferred by authority of the national government, and its naturalization laws are administered by the United States and state courts; but the elective franchise is the gift of the states. Their laws, however, in this respect are loose, incautious and lack uniformity. Strange as it may seem, in nearly one half of the states the right to the ballot is given to unnaturalized aliens who have merely declared an intention to become citizens, and in some cases they are required to have been in the country only six months.

When we consider that there are already in these United States more than 6,000,000 persons of the age of 10 years and upwards who can not read or write the English language, or in fact any language, and that this quota of ignorance is being increased by immigration every year, the importance of the question before us becomes apparent. It ought, at least, to stir us to take concerted steps for our own protection. It is not likely, for several reasons, that this immigration will cease or even diminish. While the reward of industry among us continues as attractive as it has been, and still is, the toilers will come from the four corners of the earth. Since the foundation of the government there have from time to time been a fear and jealously of this peaceful invasion of our land by the people of other countries, but neither this fear nor

jealousy has prevented or will prevent them from coming. As the peoples of the earth rise in the scale of civilization national barriers tend naturally to subside. The time comes when we can not without embarrassment, and it may be a violation of treaty obligations, say to a nation which buys our goods, receives our missionaries, adopts our customs, welcomes our civilization, and perhaps embraces our faith, that its citizens shall not live among us whatever be the color of their skin. And, as we have said before, the best class does not come; but more likely the poor, the discontented, the ignorant and vicious. Our common school has little chance with the immigrant himself, but must exercise its miraculous molding power upon his children and the subsequent generations born in this country.

Our naturalization and ballot laws should be revised. We handicap the influence of the schools when we throw wide open the doors of the elective franchise to the new and unworthy alien. It must be remembered that residence among us does not entitle one to citizenship, and that citizenship does not necessarily carry a right to the ballot. It behooves us to carefully guard the integrity of the latter. It is the palladium of our liberties, and instead of being an article of merchandise or the subject of careless gift, should command from us an almost religious reverence. The high privileges it carries should not be carelessly bestowed upon the ignorant or the unfit or any one without a good understanding of our form of government and a thorough sympathy with our institutions. The truth should ever be uppermost in our minds; that in the hands of an ignorant or vicious electorate representative government can not long survive.

Saturday morning, October 19

INDUSTRIAL EDUCATION IN MASSACHUSETTS

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During the past two years industrial education, under state auspices, has been energetically advocated in Massachusetts, and during the past year the state has taken active steps to promote the establishment of schools for the training of workers in all the important industries of the commonwealth.

The first Commission on Industrial and Technical Education, appointed for one year by Governor Douglas more than two years ago, made an important report (in April 1906), on the need of industrial education and industrial conditions in Massachusetts; and recommended a statute requiring the Governor (Governor Guild) to appoint a commission on industrial education. This statute was modified by the Legislature, and adopted. The commission consists of five persons appointed for a term of three years, and is charged with the powers and duties enumerated below.

The present commission (Governor Guild's commission) on Industrial Education was appointed on August 31, 1906, and was organized in the following month. Since then, it has been actively engaged in the endeavor to carry out the provisions of the statute under which it was appointed. The most important provisions of that statute are as follows:

1 To continue the investigation into industrial conditions and industrial education begun by the earlier commission, and to provide for lectures on the importance of industrial education and kindred subjects.

2 To visit and report on all special schools in which industrial education is carried on.

3 To initiate and superintend the establishment and maintenance of independent industrial schools (i.e. schools independent of the existing public schools), including schools for instruction in the principles of agriculture and the domestic and mechanic arts, for boys and girls in various centers of the commonwealth, with the cooperation and consent of the municipality involved or the munici-

palities constituent of any district to be formed by the union of towns and cities; such schools to be for children over 14 years of age.

4 The commission has all necessary powers in the conduct and maintenance of industrial schools, and money appropriated for their maintenance by a municipality and the state is expended under its direction.

5 To provide in the industrial schools part time classes for children between the ages of 14 and 18; and evening classes for such persons and older persons already employed.

6 These schools are to be supported by money appropriated by the municipality and by the state, the state aiding in the maintenance of such schools, in proportion to the expenditure locally for schools. Each payment to any city or town, however, requires a special appropriation by the Legislature.

7 The commission is required, also, to report annually to the Legislature on the condition and progress of industrial education during the year, stating what industrial schools may have been established and the appropriations necessary for their maintenance, and further to make such recommendations as the commission may deem advisable.

8 Especially the commission shall consider and report at an early day on the advisability of establishing one or more technical schools or industrial colleges, providing for an extended training in the working principles of the larger industries of the commonwealth.

9 The commission must appoint a secretary, who is to be its executive officer.

Under this statute the Commission on Industrial Education has been carrying on its work. It was important that the secretary of the commission should be a man of broad experience, of good training, and of unquestioned interest in industrial education. A circular letter was sent to consulting engineers, heads of manufacturing establishments, business men, editors and others, defining the qualifications which the commission desired its secretary to possess, and asking for suggestions as to suitable candidates. This letter brought many responses, with the result that the commission considered carefully the various qualifications of 67 different persons. Their choice finally fell upon Mr Charles H. Morse. Mr Morse has been superintendent of the Rindge Manual Training School, Cambridge, since 1895; and, in addition to the administration of this school during the past 11 years, Mr Morse has been called as a

mechanical and electrical expert in nearly 200 cases in the courts of Massachusetts, New Hampshire, and Rhode Island. He has done work as consulting engineer for several railroads and street railroads, and for various private individuals. For some years Mr Morse has been one of the directors of the Massachusetts Charitable Mechanics Association Trade School, Huntington Avenue, Boston; and for two years he was, without any cost to the city of Cambridge, principal of its evening school of trades, which is carried on in the Rindge Building. In assuming his duties as secretary of the commission, Mr Morse laid aside all other remunerative work of whatever description.

Mr Morse was appointed secretary of the commission on January 1, 1907. Until that time it had secured the services, as temporary secretary, of Mr Robert A. Woods, head of the South End House, Boston. The commission had, however, begun its work immediately upon its organization in September. An extremely important duty of the commission was to inform itself concerning the data of the comprehensive and complicated problem with which it had to deal. It has, therefore, studied existing industrial schools in Massachusetts and elsewhere; it has devoted much time to conferences with manufacturers, business men, and wage earners; and with teachers who had had experience in teaching trades in this country and abroad; and it has studied the report of the first Massachusetts Commission (the Douglas Commission) on Industrial and Technical Education (1906). The commission was thus enabled to work out a provisional plan for industrial schools in Massachusetts in the light of what was deemed necessary and feasible, and of what had been, in part, achieved elsewhere.

The commission soon discovered, as was expected, that members of labor unions not infrequently maintained an attitude of suspicion or even of decided hostility toward industrial education. But the commission has found, as a result of its conferences with the representatives of organized labor, a tendency to fairness on their part, which is highly gratifying; and it has come to believe that industrial schools, in accordance with the plans of the commission, can be founded in Massachusetts not only without the opposition of organized labor, but, in many cases, with its pronounced support. One notable instance of this support has already been afforded by the Central Labor Union of Pittsfield, which passed a resolution approving the plans of the commission and urg-

ing the city government to establish an industrial school in accordance with these plans.

Organized labor seems to recognize that industrial education is inevitable and necessary; and that it would be better to have this education organized and carried on under state auspices, in the interests of all concerned, rather than by individual manufacturing concerns who naturally would carry on such education as they might establish in connection with their factories primarily in their own interest. Organized labor also realizes, I think, that the welfare of the children will be promoted by a proper scheme of industrial education. The fear that such education might flood the labor market with strike breakers and with persons hostile to organized labor is not likely to persist in view of the fact that the schools proposed by the commission are technical schools as well as trade schools, that they distinctly avoid short cuts to the trades, and that their graduates are likely to be persons of great value to the labor unions themselves. Further, the recognition by the commission that such schools can not make a journeyman any more than a law school can make a lawyer, a medical school a doctor, or an institute of technology an engineer, helps to allay the distrust with which the proposed industrial schools are still regarded.

Two important aspects of the subject under discussion can not be treated specifically in this paper, and one closely related phase of education, equally important, can not be discussed at all. I shall have time to refer only incidentally to industrial education for girls, and to agricultural education for boys and girls; and shall have to omit all discussion of commercial education. I need all the time at my disposal to discuss the general problem of industrial education with special reference to the training of recruits for our leading mechanical industries. Nevertheless, as will be apparent, I trust, much of what is said will apply to all phases of industrial education for boys and girls, and for wage earners already employed.

The remainder of this paper is devoted to setting forth, at some length, as I understand them, the considerations that have led Massachusetts during the past two years to take the active steps described above for the development of industrial education. Heretofore we have planned the work of our public schools almost entirely with reference to "culture"; we have done very little to stimulate a vocational purpose, and less still to provide for the realization of that purpose. In other words, while the schools have

laid stress on culture as the end of education, they have laid almost no stress on preparation for a vocation. We may go farther, and say that the schools have sometimes even disparaged the vocational purpose in the training they give. They have been afraid of utilitarian aims, and, sometimes, by a curiously inadequate conception of their real function, they have even measured their usefulness by the extent to which they have kept the distinctly useful out of their work.

By way of illustration I need only cite the difficulty we have had in getting manual training for boys, and sewing and cooking for girls recognized as appropriate school subjects or activities. Manual training is, to be sure, not vocational training, as will be shown later on; but, whatever manual training may be, its bearing on such training is clear. And it was this obvious bearing on preparation for the vocation of the artisan and the engineer that caused the first advocates of manual training after our Centennial Exposition to urge its claims on the attention of the schools. But so strong was the opposition to teaching a utilitarian subject in the public schools that the claims of manual training for recognition have been based, until quite recently, chiefly on its "psychological" value. I do not wish to belittle the psychological value of manual training, but the strongest reason for giving it a place in our scheme of public education is that it introduced our youth to a sympathetic understanding of the constructive activities which constitute so important a part of contemporary life. It has not been entirely possible to rob manual training of its distinctly useful quality in public elementary and secondary schools, although the attempt has been made. Nevertheless, in many schools it has been pretty thoroughly academicized. This is one reason why so few of the pupils and graduates of our manual training schools become craftsmen. The manual training, like other school activities, has been used largely as a means of "general education," regarded as an end in itself or as preparation for further (usually technical) education. As for sewing and cooking, they too have been urged for their "psychological" value. But there has been more speedy recognition of the weightiest reason for giving them a place in the schools — namely, their *supreme usefulness* in view of contemporary social conditions and our enormous and increasing immigrant population.

It is strange that we should have been so reluctant to admit the distinctly useful into our scheme of public education — that

is, to admit that one of the functions of public education is to recognize the claim of elementary vocational training as entirely legitimate and desirable. For the principle of vocational training at the public expense has long been recognized in the field of higher education. The state normal schools of the country have educated teachers since 1839, and the state universities have educated teachers, lawyers, doctors, druggists and engineers, and they continue to do so; and the state agricultural colleges give training in agriculture, and often in engineering. Massachusetts, though without a state university, has long aided technical education by scholarships in the Massachusetts Institute of Technology in Boston, and in the Polytechnic Institute in Worcester, and by direct grants of money to those institutions. Massachusetts also maintains, partly at public expense, three textile schools for the training of textile workers who desire to rise in their calling.

Our elementary schools and our high schools together constitute, theoretically at least, one continuous educational scheme through which a youth, whatever his circumstances in early life may be, may secure the elements of general culture; and through which, if his circumstances permit, he may attain, on the basis of the preparation secured in school, a college education; or enter at once on professional study in nearly all the professional schools of the country. We have thus planned our educational scheme primarily in the interests of those who have a long educational career ahead of them, and who need not therefore give any immediate attention to preparation for a life pursuit.

Nevertheless, it is well known that the great mass of our children and youth are obliged to leave school at the end of the grammar school period, or when they have attained the upper limit of the compulsory school age — 14 years, in most states. That is to say, the public school system in which we take a just pride, as now planned, does not reach the great majority of our youth during the critical period of adolescence. This is the period when life aims begin to have a serious and lasting importance; when the child becomes a youth; when the habits formed rapidly acquire permanence; when the plasticity of earlier years gives place to stability. And because this is so, what happens to him then is likely to permanently shape his future. Yet during this period we send the great majority of our youth into the world without further systematic educational influence, and usually without any com-

prehension of the serious purposes of life or training in the endeavor to realize them.

The question which we have to answer is, what becomes of the great majority of these young people who enter their active life work at the early age of 14, with no preparation save that afforded by the general education of the elementary schools? Some inquiry into this question was made in Massachusetts two years ago, and it was found that there are probably no less than 25,000 boys and girls in that state between the ages of 14 and 16, who are not in school. They are at work in various kinds of juvenile occupations, or, they are idle. The boys become elevator boys, errand boys, office boys, they drive a wagon, or do other work in which they learn nothing, in which no demand is made on them for the application of what they learned in school; and consequently by the time they are 17, 18, 20 or more years of age, they have an earning capacity but little greater than that which they had when they first left school. And a similar fate overtakes the girls. Moreover, the unfortunate education of shifting experience and environment during these years does much to destroy both the substance and the spirit of the education which they received when in school. The result is that at the threshold of citizenship the great majority of these young people are actually more ignorant that they were when they left school. They are sophisticated, to be sure, but they have seldom acquired the characteristics of substantial manhood and womanhood; and, as I have just said, economically they are but little more valuable than they were when they began to work. They have not become increasingly valuable "economic units." And the reason is, of course, that in the unskilled pursuits which they have followed it was impossible to acquire the character, knowledge, and skill which would give them an earning capacity proportionate to their years.

A striking illustration of what I am saying was offered by the elevator boy in the building in which the offices of the Commission on Industrial Education are located in Boston. This boy said to our secretary, "Can't you find me a job that would pay me better?" Mr Morse said, "How old are you?" "Twenty-one." "What can you do?" "Well, you see, I left school at 15; I have drifted about from one thing to another since; recently my father died and I find it necessary to earn more in order to help myself and my family." Here was a youth 21 years of age, with no capacity to do anything that is worth paying more for than the sum paid for

the juvenile services that he had been engaged in since he was 15 years old. This case is probably typical of the great majority of the 25,000 young people in Massachusetts to whom I have referred, and it is only too probable that what is true of Massachusetts is true of other states. The investigation referred to above also revealed the fact that a large proportion — the majority — of these children would be in school between the ages of 14 and 16 if the school afforded a training that promised increased earning capacity. It is fair to conclude, therefore, that the present condition of many young workers, typified by our elevator boy, is preventable.

Moreover, it is clear that the most valuable resources which any state has are its young men (and young women). It is clear that the greatest waste is the waste of these resources. The failure to develop them to their fullest capacity is an irredeemable failure. Boys are not wanted in the industries until they are 16 years of age, and in some industries they are not wanted until they are past 17. If, therefore, between the ages of 14 and 17 these boys are allowed to drift, or if they go about from one occupation to another in which they do not develop such capacity for mechanical pursuits as they have, or if they remain in school and the academic traditions prevalent there turn them away from the trades, as is not uncommon, they too commonly go to swell the ranks of the unskilled and, as they grow older, of the dissatisfied, the stranded, and the dependent.

Although boys are not wanted in the industries until they are 16 years of age, the years from 14 to 16 are, nevertheless, exceedingly valuable years for education — an education that teaches them the significance of a skilled vocation, and that helps them to explore their capacities and their tastes for the vocations in which skilled labor is needed. These years are, therefore, extremely valuable for the purposes of industrial education. What the nature of that education might be I shall describe later on. I shall first sketch the difficulty which boys now find in learning a trade without special preparation.

Under the specialized condition of modern industry it is usually exceedingly difficult for a man to learn his trade in the shop, and sometimes impossible. The old apprenticeship system which enabled a man to learn the whole of a trade is dead. It is well known that today the man in the shop works at a part of the product with a given machine and knows little of what is done toward the completion of that product by other men and other machines. He is

a narrow specialist, working day by day at the same kind of work under precisely the same conditions, the machine requiring but little exercise of thought or ingenuity. Usually he knows little or nothing about the machine itself. The shop has machinists who repair the machine. Under such circumstances a man loses the habit of thinking, since no demand is made on him for thought. It is true, to be sure, that all men have not "all the conveniences for thinking," even if they were called upon to think, but under the exigencies of the modern shop the habit of thinking is rarely developed. This specialization in modern industry is, however, highly profitable to the manufacturer. It is one of the reasons why goods can be produced so quickly and so cheaply. It is, therefore, like other modern developments, a condition which will survive.

In a shop if a man wishes to learn his trade, he has, as was said a moment ago, great difficulty in attaining his end. What happens is usually something like this. A youth applies for work in a shop. He is put, let us say, on a milling machine. He learns in the course of a few weeks to run that machine. Meanwhile, of course, he spoils more or less material. The machine is subject to his ignorant handling, and necessarily gets more or less out of repair. The product which he turns out is more or less imperfect in quality and the total result is, temporarily at least, a loss to the manufacturer.

If the youth is ambitious, he naturally desires to learn to run the other machines of the shop; but when he asks the foreman to be transferred to another machine, he will be told, "You are doing well enough where you are." The reason, of course, is plain. Every time he is transferred to a new machine the process previously described is repeated. If there are 100 or 500 raw men in a shop, the loss to the manufacturer is considerable. The shop exists for turning out products, and not for teaching men how to turn out products. In the shop, therefore, no one has the time, and very often no one has the inclination, to help a man to learn his trade. That isn't what the shop is for.

What happens, then, to our ambitious young man who persists in his intention to learn his trade? He quits; and applies for work at another shop, asking for work at another machine, saying that he is, let us say, a lathe hand. Meanwhile, he has naturally become somewhat familiar with a lathe and knows something about the working of it. Shortly after he begins his work as a lathe hand, the foreman comes around to see how he is getting along,

looks at the work and says, "You can't do this work; you can go." Naturally the man has to go to another shop, and there the process is repeated with the possibility, however, of a longer stay. This procedure an ambitious man will continue until he has made himself, by repeated changes and brief periods of practice, a lathe hand and can do satisfactory work. I have heard of one man who repeated this process 19 times in his endeavor to learn his trade. It won't do to talk to such a man about the dignity of labor. By such a procedure a man may require six or seven years to learn his trade; and even then he commonly learns only the processes of the trade and not the theoretical foundations of it. The mathematics, drawing, science, and the rest, applicable to his particular trade, are inaccessible to him. He has little opportunity to develop "industrial intelligence," and the "shop and business ethics" that grow out of insight into and consequent interest in his work, and the sense of responsibility born of conscious resources as a workman and a man. Consequently, although he is better equipped for steady work and for possible promotion to a foremanship than the ordinary specialist, his further progress is obstructed, if not prevented, just at the point where he could become most valuable to himself and to his employer.

It must be remembered that the great mass of young workmen are not ambitious and persistent enough to follow such a difficult road in learning their trades. The result is that most of them fall by the way; they become narrow workmen who can handle a single machine only, and whose prospects of an upward career in their trades are consequently very meager.

Now let us follow the body of ambitious workmen whom I have described as persisting against tremendous odds in learning their trades so that they can be useful in any part of the shop and, if possible, rise to the grade of foreman. Such men constitute an army of workers who are going from one factory to another, "stealing their trades," as the phrase is. These men spend too many of the most valuable years of their lives in overcoming obstacles to a career of usefulness — years that should represent steady progress in that career. Moreover, they can not become attached to a locality, and the steadying and inspiring sense of usefulness to a single employer or manufacturing concern can not be realized.

Many manufacturers have encouraged their employees to seek instruction by correspondence, and the extent to which our artisans

avail themselves of such instruction is remarkable. For example, out of 1700 employees of the Stanley Electric Works at Pittsfield, Mass., 300 were last year enrolled in correspondence courses. This is decidedly creditable to American workmen, and it is not discreditable to the correspondence schools. But the disadvantages of instruction by correspondence only are great and obvious. Moreover, since a considerable number of those who enrol in correspondence courses do not for various reasons continue them, a considerable part of the money paid for such courses is wasted. They do, however, afford the sole available means to many persistent and ambitious men to secure the theoretical instruction on which their upward career depends. Besides the correspondence schools, the Y. M. C. A. and other philanthropies offer some opportunities for industrial education to men already employed in the trades. Public schools for trade instruction, aside from the public evening drawing schools, are very rare. In Massachusetts there are only two such schools, the public evening school of trades at Springfield, and a similar school in Cambridge, and these schools are primarily for men already in the trade.

It may seem odd that under such circumstances the manufacturers themselves have not more frequently established schools in connection with their establishments for the training of apprentices. But it is clear that such schools are expensive, if they are in the interests of the workmen as well as of the employer. And hence only the largest manufacturers can undertake such apprentice schools anyway. Examples of such schools are found in the General Electric Works at Lynn, Mass.; in the works of Brown & Sharp at Providence, R. I.; of the Baldwin Locomotive Works at Philadelphia. But the manufacturer prefers to employ the men who know one machine. He gets his foremen from other shops, or from Europe; or he may try to train the foreman he needs in his own shop, usually with many disappointing experiences.

Nothing is clearer, however, than that the means hitherto employed are inadequate to meet the demand for skilled labor. During the past year manufacturers have said to me repeatedly that if they could find the skilled help which they need, they could double their plants and hence largely increase or double their output, and that they never have as many foremen as they need. On every hand the need of skilled labor is deplored, and yet we have done and are doing comparatively little to meet this need.

It is well known that a state like Massachusetts depends on its industries for its life and prosperity. We are poor in material resources. We are rich in the best resources which any state possesses — men, the resources to which I have already referred. If we develop them as we might, we shall not lose our position among the manufacturing peoples of the world, but we may look forward to an increasingly important place among them.

There is a specious American complacency which stands in the way of the proper development of our industry and commerce, not only in Massachusetts, but in the country at large. This was clearly exemplified at the exposition in St Louis. It is well known that the Germans who visited that exposition went away much impressed by the magnitude of our industrial and commercial enterprises, and the enormous wealth which resulted therefrom. But they told their fellows on their return to the Fatherland that they had nothing to fear from the American people as long as our complacency prevented us from seeing that it was only the abundance of raw material and the extraordinary ingenuity displayed in our industrial and commercial combinations which led to our success. As a nation we had yet scarcely begun to realize the importance of quality in our output, and of trained workmen in making the most of our resources; and until we did, it was not likely that a nation like Germany which emphasizes such training and the quality of its output had anything to fear from the competition of the United States.[1]

Such comments, by thoughtful observers, contain a lesson that Americans should heed. Not long ago Mr Vanderlip of New York, whose name must be well known to every one in this audience, expressed himself, in substance, as follows: The remarkable prosperity of the United States is due chiefly to three causes: the great abundance of raw materials, our ingenuity in the invention of machinery, and our genius for commercial combinations. Not one of these three causes, however, can be looked upon as a permanent cause of success. Great inroads are being made on our raw materials and some of them are even now fairly well used up. Labor saving machinery and cheap production can not be a monopoly of the United States, for this machinery is obtainable the world over. American commercial combinations are being

[1] Monthly Consular Reports of the United States, January 1905, p. 229. Referred to by Prof. Harlow Stafford Person in his "Industrial Education." Houghton, Mifflin & Co. 1907.

imitated everywhere. It has never yet been shown that the cause of American success in foreign markets is due to the quality of the goods produced. In that respect we have not yet made much progress, and until we do we are, of course, at the mercy of those who are able to use all the resources which we possess and, in addition, to use them to better advantage. So far, Mr Vanderlip.[1]

Germany is the classical example of a nation that has not neglected the development of all its resources, men included. I had the good fortune three years ago to spend the winter in Munich. In that city there are 40 different kinds of industrial continuation schools — schools for chimney sweeps, for coachmen, for hotel and restaurant waiters, for jewelers, shoemakers, carpenters, blacksmiths, tinsmiths, machinists, printers and bookbinders, and the rest. The name continuation school — *Fortbildungsschule* — is chosen advisedly; for every youth who graduates only from an elementary school is obliged by law to continue his education in some continuation school during the period of his apprenticeship to his trade; and each year youth finds a continuation school appropriate to his calling. Employers are by law required to give their employees the time to attend these schools — from 6 to 12 hours a week, depending on the trade, for from three to five years. These continuation schools are not usually evening schools; because it is well known that boys 14 to 15 years of age, after a hard day's work in a shop or factory or on a building, are unable to profit by evening instruction to the extent to which they could profit by instruction if it were given in the daytime. Moreover, it is clear that forced school work at the end of an arduous day is unhygienic.

In these continuation schools one of the most suggestive arrangements is the close correlation of the theoretical foundations of each trade with the instruction in the processes of the trade. That is to say, the mathematics of the school is the mathematics of the shop, whether it is jewelry or shoemaking or carpentery. The same is true of the machinist's mathematics. Similarly the drawing of the school is the drawing of the shop. The problems which the boy finds in the shop today are dwelt upon at length in the school tomorrow. In the same way the closest possible relation of the sciences, physical or biological, to the trade concerned are maintained. The youth learns also the history of his trade, and civics, and the proper use of his mother tongue in relation to his trade.

[1] American Industrial Training as compared with European Industrial Training. In the Social Education Quarterly. Boston, June 1907.

From the continuation school the youth at 18 or 19 enters the army, where for at least two years more he is under systematic educational influence. That is to say, the German nation has been unwilling for more than a generation that a youth after he leaves the elementary school should be without systematic educational influence until he reaches the age of citizenship; while, in this country, we are just beginning to realize our responsibilities in this respect.

The effect of the extraordinary scheme of technical education of all grades, not only the elementary technical education which has just been sketched, but of all higher grades of technical education, on the progress of German industry and commerce is well known. Before the Franco-Prussian war Germany was industrially and commercially a rather unimportant nation. Immediately after the Franco-Prussian War, after German unity had been accomplished, the nation devoted itself to the development of its educational system, and to the development of industry and commerce; and it has become, as is also well known, one of the most important manufacturing and commercial nations of the world — a tremendous rival in those respects to other progressive nations. While Germany's educational system is not the sole cause of this extraordinary prosperity, it is, nevertheless, one of the most important causes, and by the Germans themselves is regarded as *the* most important.

Now while it would be undesirable and impossible to transplant any German institution to this country just as it exists in Germany, it is, nevertheless, clear that this particular German institution offers valuable suggestions to America. We flatter ourselves that in our democratic society we provide equal opportunities for all through education. That is to say, we claim to provide educational opportunities that will enable a man to make the most of his capacity, his industry, and his character, whatever his original station in life may be. And yet we have failed to provide such an opportunity for that great mass of our population who must face the most serious problem of life — self-support and the means of progressive well being — at an early age.

Thus far, I have endeavored to show that there is a great need of industrial education. The manufacturer needs skilled labor. The workman needs an opportunity to develop "industrial intelligence," and skill, and a sense of responsibility. I have also endeavored to show that while we have developed with much industry and enterprise the material resources which we possess, we have done little,

if anything, to promote the development of the most important resources we have: namely, the great majority of our "working men." I have endeavored to show also that while the effect of this neglect is to deprive the employer of the industrial intelligence and skill that he needs, it also deprives the wage earner of the greatest blessing which any man on earth can have — the prospect of a steady job and an increasing wage based on progressive efficiency and responsibility; and, therefore, that there is here an educational need for which we have not yet provided an educational institution. This institution is the school of mechanical industries. And it remains to sketch in briefest outline the nature of this school.

This sketch is necessarily provisional; it is conceived only as a basis for intelligent experimentation. Our commission has devised this provisional scheme after much study of the problem of industrial education, many conferences with manufacturers, with wage earners, and with teachers in the existing trade schools in various parts of the country. The Douglas commission did not develop a plan of industrial education for the state, as that task did not fall within its province. The report of that commission says very justly: "The commission does not deem it to be a part of its duty under the provisions of the resolve creating it, and in fact it is not in the power of a temporary commission, to formulate exhaustive and specific plans for industrial education. . ."

To outline a plan of industrial education — its aims, scope and methods, is, however, one of the special duties of the present commission. It was clear to the present commission, as has already been intimated, that no ready-made scheme could be imposed on the several communities of the commonwealth, that, on the contrary, every school must be closely adapted to the needs of particular industries under the varying conditions prevailing in different localities. The problem which faced the present commission was, therefore, to devise a plan which should be definite enough to serve as a guide in planning industrial schools for the state, and yet flexible enough to permit adaptation to the needs of each locality where such schools might be established. Here it is.

Each school should receive boys (and girls) 14 years of age and upwards who express their intention to learn a trade. When these schools are fully established, they would require four years of day instruction. The first two years would include much shop instruction, greater in amount and much closer to the trades than the shop instruction of most of the manual training schools now in

existence; together with related mathematics, natural science, drawing, the history of industry and commerce, particularly of Massachusetts, civics treated as concretely as possible, and shop and business English. These two years would serve first of all to direct the attention of boys and girls to a trade — would develop in them the vocational purpose — would explore their several capacities, and should enable them, with the help of their teachers, to select that trade for which they are best fitted by natural taste and capacity.

The last two years would include specialized instruction in the trades appropriate to a given locality, and the theoretical foundations of each trade — drawing, mathematics, natural science, and also the history of that trade, shop and business English, and civics, as before. These last two years could be completed in that time by pupils who are able to attend the school continuously, or in a longer time by pupils who are obliged to work a part of the time; or the work could be done by such pupils in the evening. Some manufacturers have encouraged the commission to believe that some kind of part time scheme — that is, part of the time in school and part of the time in the factory — is possible for some industries; whereas for other industries the further education of the pupil would have to be undertaken in the evening. Evening instruction for persons already employed in the trades would, of course, be an important part of every school.

In every community that has a manual training school the plan just outlined for the industrial school could be easily carried out. At this point a brief digression seems desirable. It seems worth while to indicate in a few sentences the difference between manual training and industrial training. Manual training is a means of general education just as history or chemistry or language is a means of general education. It has materials of its own and a method of its own, and hence the result is a peculiar kind of knowledge and power due to the nature of the subject and the method it demands. That is to say, each subject of instruction is a means of general education because it supplies a peculiar kind of knowledge and develops a peculiar kind of power. Each of these subjects, therefore, possesses an educational value not shared by other studies. The peculiar educational value of manual training is that it gives a knowledge of our constructive activities and a sympathetic appreciation of them which can not be gained in any other way. It is, however, as now carried on, usually much too general to be comparable to industrial training.

Manual training abstracts the principles of all trades and teaches them. It ought to make a pupil generally "handy." It is, if properly carried on an excellent preparation for industrial training. Industrial training goes farther. Besides teaching all the processes of a given trade from the first attack on the raw material to the last touches on the finished product, it teaches the theoretical foundations of that trade. Hence it gives the worker a *technical* knowledge of his trade, and begins the development of skill in the practice of it. It must not be inferred, however, from what has just been said, that an industrial school can turn out a journeyman. The skill of the journeyman can be fully developed only in the factory.

Such schools as have been sketched should be independent schools parallel to the existing high schools. They should be independent schools, because the motive which dominates them determines the value of the work done in every detail. It is clear from what has gone before that the theoretical instruction of the general high school is not adapted to specific instruction in a trade. In a general high school no specific application of the instruction is aimed at. In the industrial school everything has its specific application. Therein lies its value and its significance. In the daily pursuit of his training for a trade, or in the pursuit of that trade itself, there is constant opportunity for the application of all that the pupil has learned, and hence the possibility of progressive growth in thinking about his calling, and growth in his command over it; not only in the processes of the trade, but in all that the trade means. Under such circumstances the workman knows not merely the processes of his trade, he knows all of them as he can not learn them in the factory; but he knows the principles of his trade as well, and he is able to form a just estimate of his own value to himself and to the community. Whatever industrial discontent such a workman may feel will be enlightened discontent — a kind of discontent that a democratic society always respects.

To sum up: 1 The progressive development of all high grade industries requires skilled workmen possessing industrial intelligence, that is, comprehensive insight into and intelligent interest in their several trades, as well as skill.

2 The present conditions of production are unfavourable to the training of such workmen in the shop or factory, and sometimes render such training impossible.

3 All industries, whatever their grade, need more men than are now obtainable who are capable of acting as foremen, superin-

tendents, or managers — men possessing the comprehensive insight, interest and skill necessary for the organization and direction of a department or a shop.

4 Such men, whether workers, foremen, or superintendents, are now usually developed by chance — and they are then self-made men, possessing the merits, but also the conspicuous shortcomings of their training.

5 Meanwhile, boys and girls, young men and young women, are not only not directed toward the trades in our existing schools but are often actually directed away from them by the bookish education of those schools and their purely academic traditions. Manual training high schools are institutions for general education, like the academic high schools; although unlike them, they serve to give a certain class of pupils a high school education with the help of manuel training, or, like them, to prepare their pupils for professional training in some college or engineering school.

6 Boys are not wanted in the industries until they are 16 years of age. The result is an army of young men and young women from 14 to 16 years of age, most of whom are either at work in various kinds of juvenile occupations in which they learn no trade, are subject to little, if any, beneficial general education, and often to much harmful education from shifting experience and environment. The majority of these children would be in school if the school promised preparation for some life pursuit.

7 These years, and the subsequent years, are, however, valuable for industrial education, but there is at present no agency whereby this education is provided save to a limited extent, and then chiefly by philanthropy, or by correspondence.

8 Hence the need of industrial schools to supplement the existing public schools — to meet a new educational need which has evolved with the evolution of our industry and commerce. Such schools should receive pupils 14 or 15 years of age who declare their intention to learn a trade; and would, therefore, be parallel to the existing public high schools but independent of them.

9 Such schools should be part of the public school system, and should offer a course of study covering four years of instruction. The entire course could be completed in that time by those pupils who could attend continuously; in a longer time, and partly in the evenings, by those who could not. The first two years would comprise general shop instruction with related drawing, mathematics, natural science, the history of industry and commerce, shop

and business English, and the reading of appropriate articles and books. The last two years would give the shop instruction for particular trades; and for each trade represented, the drawing, mathematics, physics, chemistry of that trade, the history of that trade, treated both as special history and as a branch of general history, civics treated as concretely as possible, and English as before.

11 Evening instruction for men and women already engaged in the trades would be an important provision in all such schools.

The final result would be a much needed extension of public education to which Massachusetts, at least, is committed — the realization of our present contention that: *An efficient public school system of public education includes adequate provision for vocational training for boys and girls over 14 years of age, and for older persons already employed as wage earners.*

Discussion

Rev. E. P. Powell, Clinton, N. Y.— These apples (holding up some superb specimens from Colorado) show what American industry is doing. These were grown on what fifty years ago was, on our maps, The Great American Desert. We are going to make the desert blossom like a rose garden; and our schools must lead the way. The 19th century was the century of trade; the 20th century is the century of agriculture; and the farmer is going to Burbank the world. If I had known what sort of fellows you are here I would have brought along a bag full of beans, with pods 10 inches long and 10 beans to the pod, to show you what my boys and girls must be able to construe instead of construing the Latin verb. The other day two boys came to me and wanted my advice about going to college. I asked them where they had received their education so far. They named a certain high school down the Mohawk valley, and when I asked them if they had been to school anywhere else, they said "No." They were boys about 18 or 20, I noticed when they shook my hand that they had a tremendous grip and I suspected they had been milking from 5 to 20 cows every day. I said, "Boys, can you milk?" and they said they had to milk 13 cows every morning and every night. "Did you learn that at school?" "No, we learned that in the barnyard." "Well, can you run a straight furrow, and can you raise a good field of corn, and plant an orchard, and spray apple trees, and can you pick apples so they won't rot as soon as your customers get them?"

The boys thought they could do all of those things, and I said, "Did you learn that at school?" No, they had learned that at home. "Well, boys, it seems to me that you have been at school somewhere excepting the high school, and those things which you understand, those things which you apply, those things which make your family happy, you learned in the field and the orchard and in the garden, through work." I did not want to say anything against the high school, but when we came to talk the matter over we found that there is a vast scheme of industrial education going on, and that our schools ought to ally themselves more closely with this sort of education.

In the original town school of Massachusetts we had nothing more than a supplement of the family, and it gave what the industrialism of those days required. It did not undertake to displace the family as a source of education.

The exigencies of pioneering created the district school, which was also distinctly a part of family life, and industrially cooperative with home work. The academy grew up as a preparatory school for the colleges, which were private institutions. All along through the forest, district schools stood like marked trees, to show the track of Puritan ideas. While they did not directly educate the hands, they did not educate the children away from home life and the farm.

The state university came in as a public institution, but with college instincts. The first was founded in Michigan, as the Catholepistemiad — with fourteen Didaxias. This university, intensely classical, did however include in its curriculum, biology; and it allowed for women instructors. Harvard soon became the University of Massachusetts; and, while in mathematics, the students only went as far as the rule of three, the president preached in Greek, and the students were required to criticize in Latin. On the whole the state universities opened the way for system, but not for industrialism. In fact here was a natural and inevitable conflict. Nothing was left to industrialism but the district schools.

The evolution of the graded town school has at last swallowed up the common or district schools, and faced the whole system toward classicalism. That is, the graded public school is involved in preparation for the college, which is a private school. The solution was not found in those states, like Michigan, that integrated all the lower schools with the university. Meanwhile the colleges, originally not very far from being high schools, have distracted the problem still more by their ambition to become universities.

The normal schools almost inevitably have been faced toward the classical college; at least they have been involved in the preparatory tendency of the lower schools.

The first struggle with this chaotic state of affairs was the effort to introduce manual training, with elementary natural science. St Louis was the first city to incorporate this evolutionary measure. I happened at the time to be one of the editors of the *St Louis Globe Democrat,* and the fight was a sharp one. Meanwhile, in 1862, the land grant act opened the way to a new sort of state university — for that is really what the agricultural college should be called. The innovation was met with a spirit of defiance and contempt. It was difficult to secure teachers qualified for original investigation. Such teachers have however not only been created in sufficient numbers for industrial education, but the country has been filled with men qualified for this sort of leadership. The agricultural college was not only an index of the growing industrialism of the age, but it very soon became a powerful motor in the same direction.

Now comes the problem how shall we associate the common schools with the agricultural state university or college; that is how shall we bring into accord industrialism at the top and classicalism at the base — Americanism at the top with traditionalism at the bottom? Must we create agricultural high schools, involving agricultural primaries? If so, we shall not only duplicate the state systems, but increase the confusion already existing. New York has several times had bills of this sort under advisement. Georgia has created an agricultural high school for each senatorial district. In other states the effort has been made to graft agriculture on to the high schools already existing. A complete system would be a state agricultural university, graded through industrial normals, (such as already exist in several of the states), down to industrial high schools and primaries. The tone and purpose would be everywhere investigation, finding out and applying what is found — Burbanking the world. Herbart and Froebel would no longer disturb us. The kindergarten would become less artificial in such a system; for the children would play not with artificial blocks, but with flowers and pebbles.

In my judgment no possible solution for this problem can come along any other road than that of industrial training of teachers. It will never be possible to overlay our already burdened school curriculum, with anything like a thorough industrial training. The beginning must be made by inspiring normal pupils with a love for nature and for nature work; with a comprehension of the fact

that training the hands and training the brain are correlated. Massachusetts apprehends the problem. The normal schools in a dozen other states are giving more or less thorough and effective instruction along the same lines. The Davis bill, (which will be again pressed upon the next session of Congress), provides an annual appropriation for industrial education in agricultural high schools, besides creating branch agricultural experiment stations. This bill assumes that our present system can not be readjusted, and that the states can not be left to their own guidance. My impression is that the states will accomplish the work, and that it will be done without the necessity of a duplicated system.

In New York State, however, while centralizing the town schools has broadened the curriculum, made more sanitary the buildings, and in other ways been progressive, it is a fact that by absorbing the district schools, the school system has been made more alien to the farm and the family. The problem crowds very hard upon us, and readjustment is imperative. It is demanded not only by agriculture, but by the trades, by social order, and by the ethical requirements of society. Traditionalism has brought with it a burden of false conceptions, not only of what is education, but of what is right and wrong. Whatever changes take place the school and the home must be more closely united. It must be understood that the aim and effort of the school is not different from the home, but is to supplement the education which is there secured. It is shameful to teach a boy distaste for the work that engages his parents. Boys and girls are sent back to the farm with no knowledge of plants or animals, and with a distaste for country life. The new school must teach honor for labor. It must include the workshop and the laboratory. In ordinary farm life, today, there is hardly a known science that is not involved; and these sciences must be so taught in our schools that they can be applied in everyday production and distribution. I think the old and the young have been far too widely separated. I am confident that Brown University is correct in enrolling the whole population as students — so far as they are willing to learn.

Industrializing our schools does not affect, however, so much the contents as it does the methods. It does not imply added studies, so much as applied studies. It is based on the thesis that all real knowledge is usable. It would give one half of the day to indoor work, with books; and it would give one half the day to garden and orchard work. The new education will consider the senses as the main means of acquiring or communicating knowledge. Our drift

has been to shorten vision, dull hearing, and bring the nose into contempt. The Australian boy, on all fours, trails marauders by the scent of their tracks; and he does it with the certainty of a hound. Humboldt tells us that when traveling in the Andes, his party was divided, for the purpose of investigating both sides of a wide valley. Late in the day he became alarmed because his friends had not come in sight. His Indian guides inquired for whom he was looking; and when informed, they pointed across the valley saying, "There they are." With a strong field glass, Humboldt adds that he could just pick them out.

The new education will require therefore, not a schoolhouse placed on the roadside, but buildings located in the middle of several acres — with shops and laboratories as well as classrooms. There must be established a right equation between hand and brain; between work and condition. You can not load a boy down with worse luggage than mere knowledge. We want the boys and girls to understand that they are going to school everywhere. Then they will understand also that they are going to school on the street corners, where Tom, Dick and Harry are the teachers.

Industrialism involves a social crisis which nothing but the school can meet and master. If we do not put trained minds as well as trained hands at the head of an industrial age, conditions will put in charge untrained minds and sneaking hands. Our whole cooperative force will fall under the mastership of scoundrels. The history of strikes is not a history of common sense on one side, any more than on the other. There is in industrialism an ethical law that corresponds to the golden rule of doing. Jesus says, "My Father *worketh* hitherto, and I *work*." Goethe says, "Everything that sets free our intelligence, without giving us self-control, is fatal."

My own views of education got a wrench, when after graduating from college, I met with spectrum analysis — just then opening the great industrial field, as well as the heavenly regions. I found that after a quarter of a century in schools I could not comprehend this revelation. I went to work and mastered it. Then nature began to take on an entirely new phase. I found that the corn blades were leaves of one big book, and my eyes were opening to read it. The educated senses discover facts; the educated mind gathers facts; the educated hands use facts. I have a learned friend who lost himself some fifty years ago in books; he has never since been able to find himself.

Not being able to find an industrial system for my children, I

built an annex to my barn — upstairs a laboratory for chemistry, entomology, botany, geology; and downstairs a shop. My boys discovered that geology meant what our farm was composed of; that entomology considered the moths and the butterflies that flew around our heads; that chemistry was the science of soils and manures; that ornithology was entering into an alliance with the birds — not making a collection of dead ones. In this way my farm became a schoolhouse, and school identified itself with home. The shop developed brain wit as well as it did hand skill. Tools were made as well as mended; engines were constructed, and finally a home-built automobile whizzed by my window. Books became aids to the hands; not stuffing for tired brains. It did not follow that the humanities must be left out of such an education.

A well conducted farm is really the only university in the world. It calls into active work nearly every known science. It applies to the production of wealth and human comfort, as well as general progress, all the accumulations of human wit and wisdom. In 1902, Professor Whitman wrote from the Marine Laboratory, at Woods Hole, that the biological laboratories had been limited to the study of dead material, and that the fundamental problems discussed could not be settled in that way. He appealed to the wealth of the country to establish a biological farm; for the experimental investigation of life histories, habits, instincts and intelligence — in the vegetable and animal kingdoms. It is for the purpose, and to the intent, of turning every farm in the United States into a biological garden that we appeal to you today.

I believe in the church; I believe equally in the school. But the true church has life, and the true school has life. Life means change, growth, progress. I feel sure that the coming school and the coming church will be much closer together, and that the two will be united in ethical effort. In that day the school auditorium will become the center of town thought and purpose; while the superintendent will become the ethical as well as the intellectual leader — altogether the most important factor in town life.

What we now demand is (1) that through the normal schools we secure teachers equipped and inspired for investigation. (2) That the union or town school be built with an inclosure of not less than five acres of land. (3) That half the school day be assigned to investigation and application — by preference the forenoon. (4) That the grading of students, and their advancement, be not based so much upon memory as upon achievement; that it be correlated with field work quite as closely as with book study.

CLOSING REMARKS

BY VICE CHANCELLOR MCKELWAY

The value of every Convocation was practically attested by Scripture. "By their fruits ye shall know them." In calling you finally to order, myself and my associates in the Board of Regents wish to thank you for your attendance. I know I am authorized by all of the speakers to thank you for your attention. I am sure that when our proceedings are put into book form and obtained by you, you will be gratified to discover an essential harmony of idea underlying each paper and all the discussion under such paper. I trust your experience of this Convocation has been pleasant. I believe it will be on reflection profitable. It may be regarded as established that Convocation committees will hereafter choose but one general subject as the case was last year, as the case has been this year. On that one subject attention will be concentrated. From that one subject thought will branch out in various directions. We will thus get the individuality which we have enjoyed. We will thus also get that variety and unity which have been rewarding and enlightening. And we will thus take home with us, as we shall to-day, a consciousness of the unity of the truth and a consciousness of its infinite ramifications in various directions, and of the essential harmony of all the divisions thus pursued. There are many men of many minds. We are very glad that the many men who have attended our occasion have shown the variety of their minds, and we trust that the Committee on Convocation for next year at least, while giving to us an equally fruitful and suggestive program, will not be quite so careful to confine the illustration of it to our own schools. The Convocation for 1907 is adjourned.

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